DRUG & COSMETIC INDUSTRY

JULY, 1952

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FRANCIS CHILSON, Production Consultant
MILTON A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
FRANK CHILD III, News Editor
MAX FRANKEL, Art Director

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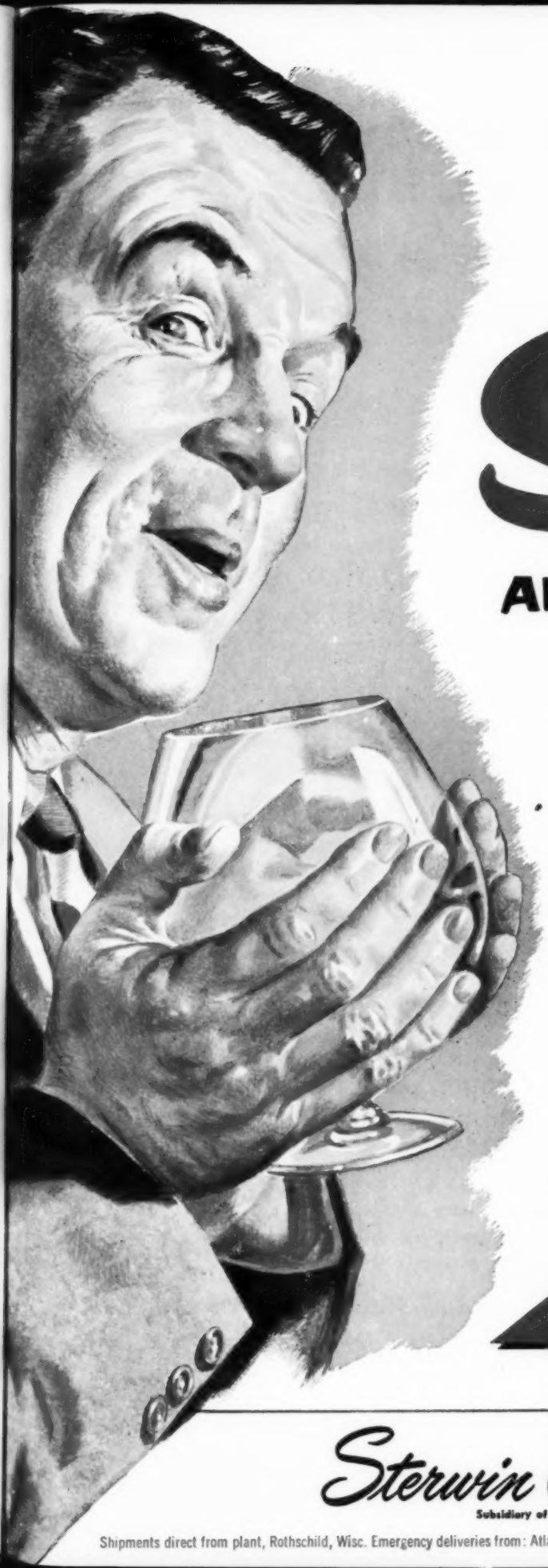

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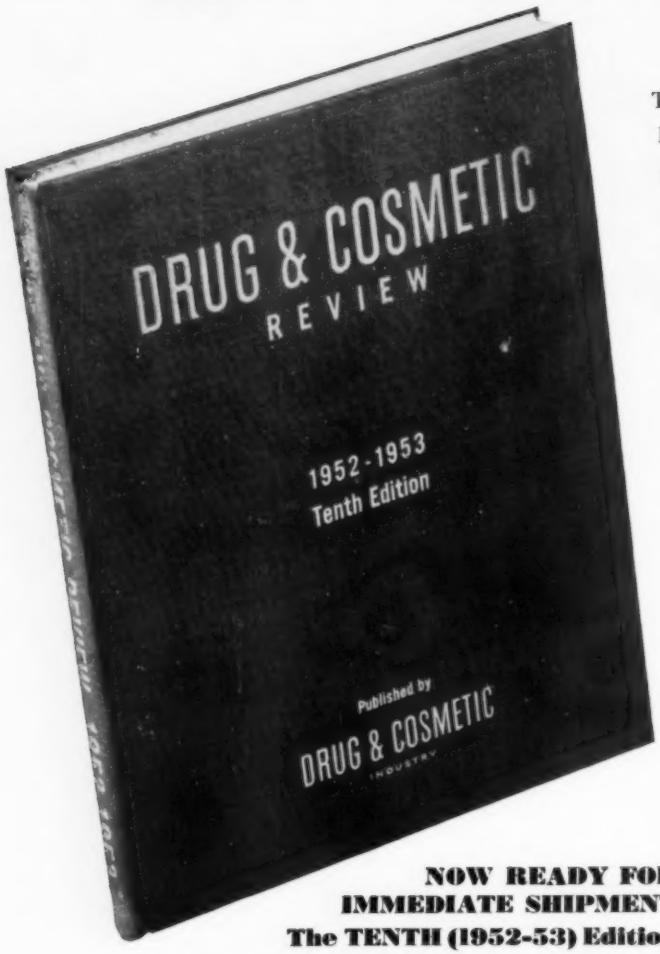

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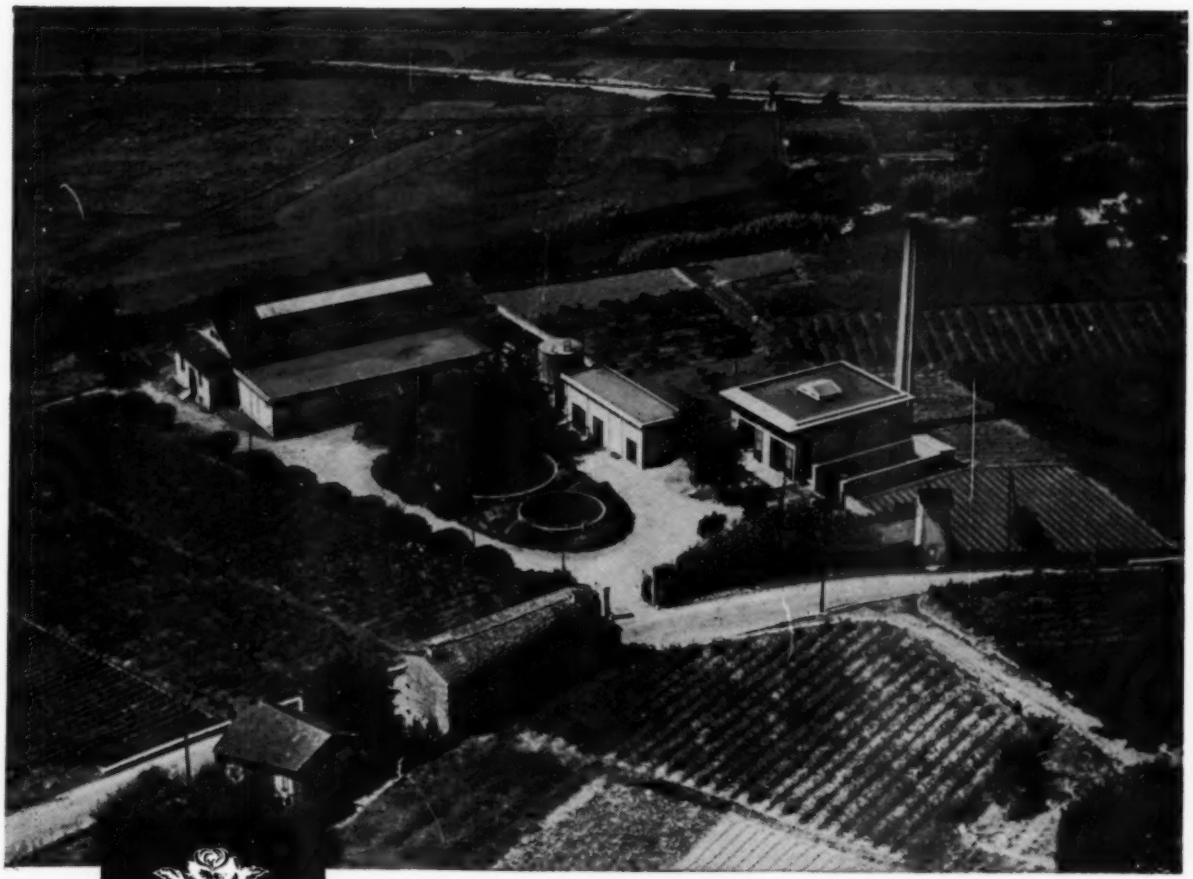

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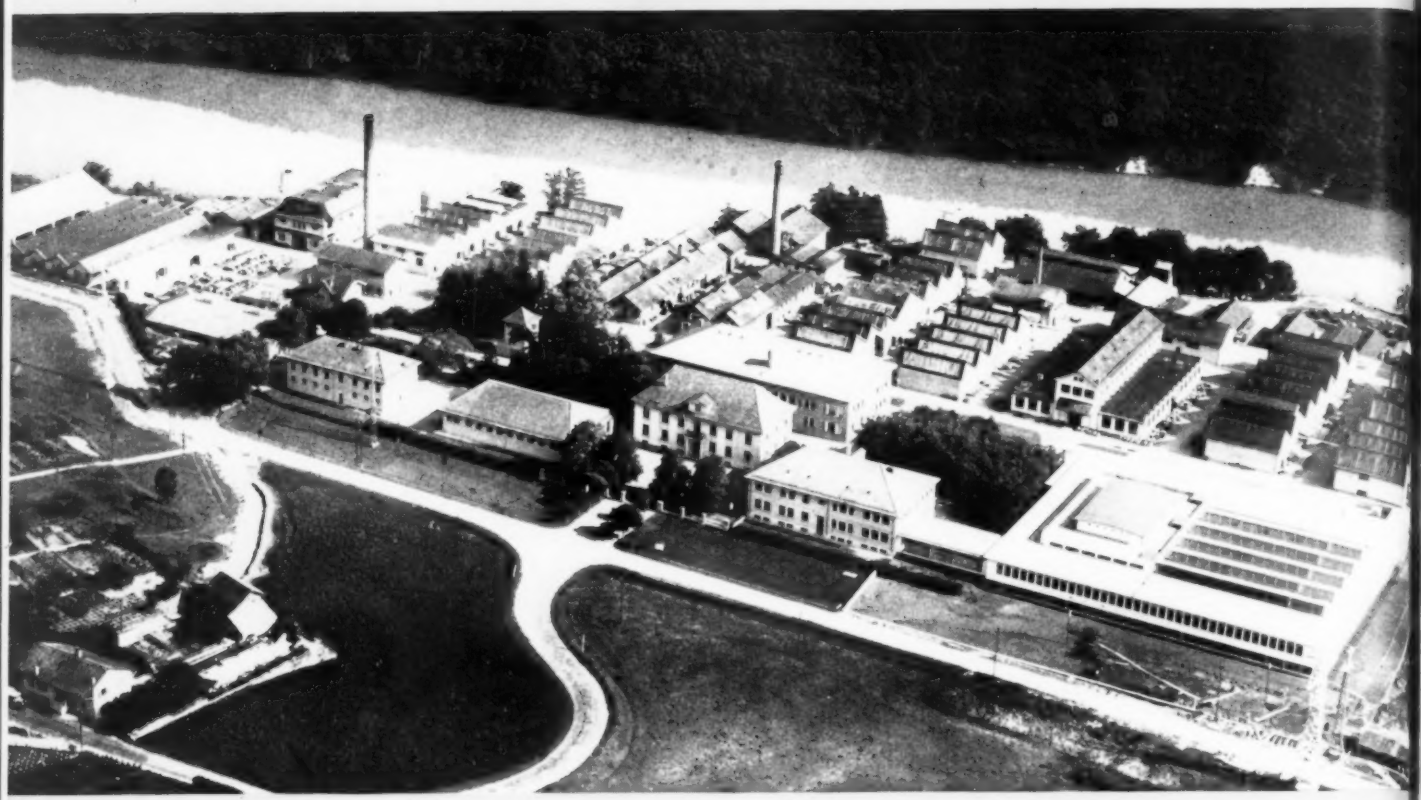

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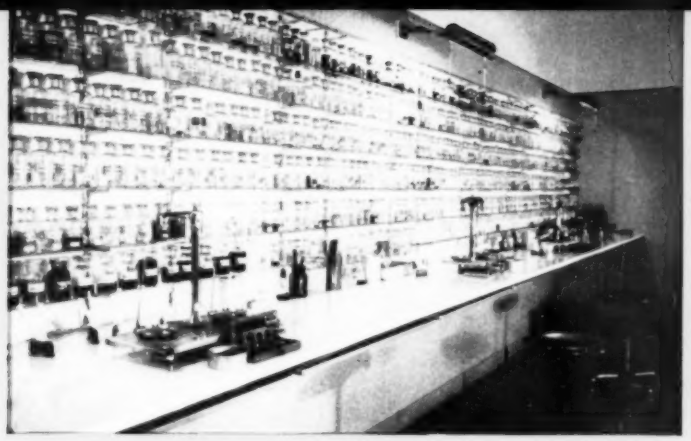

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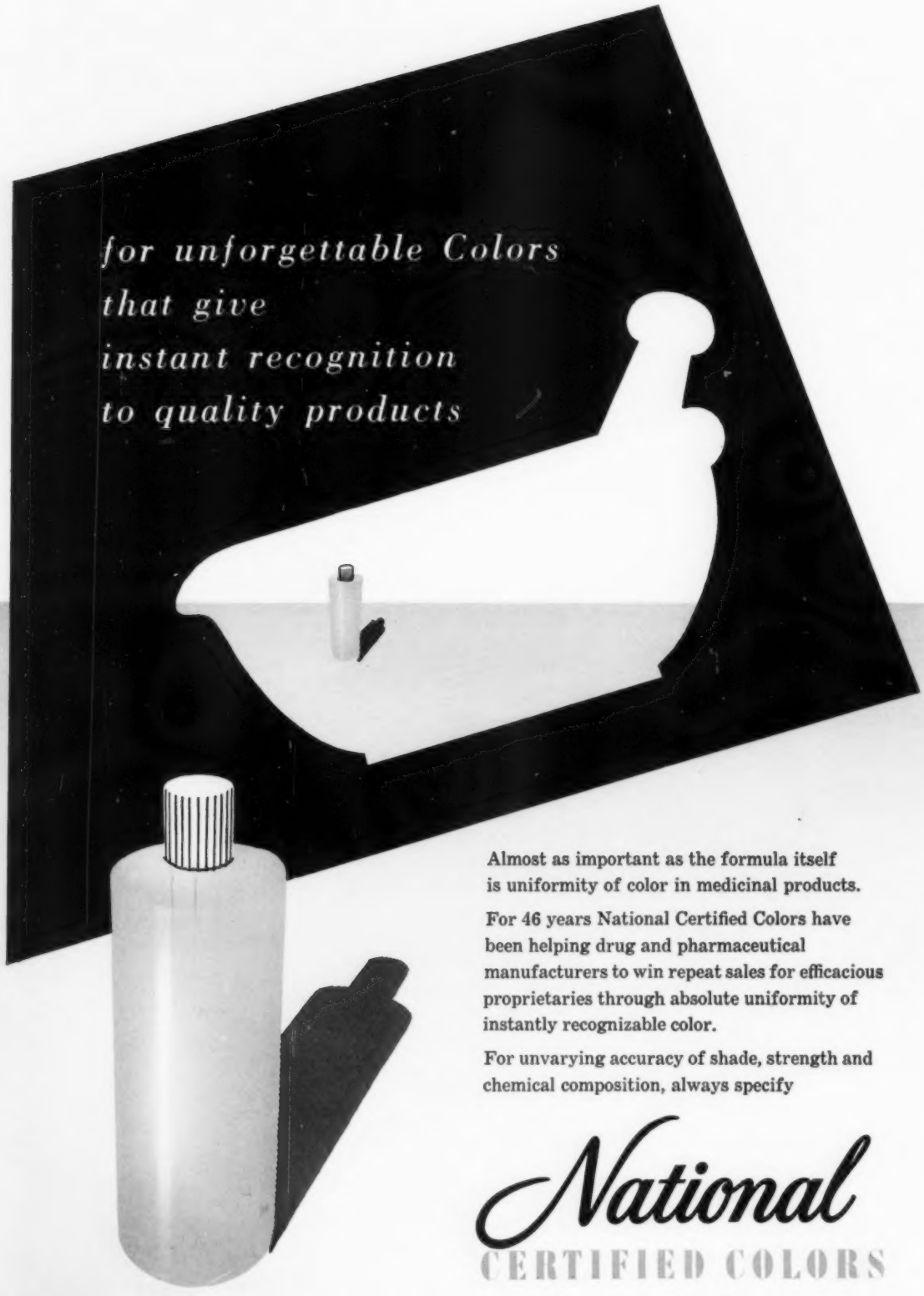

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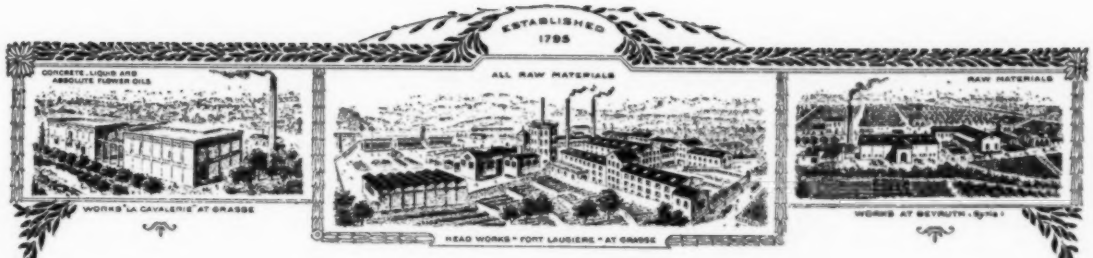

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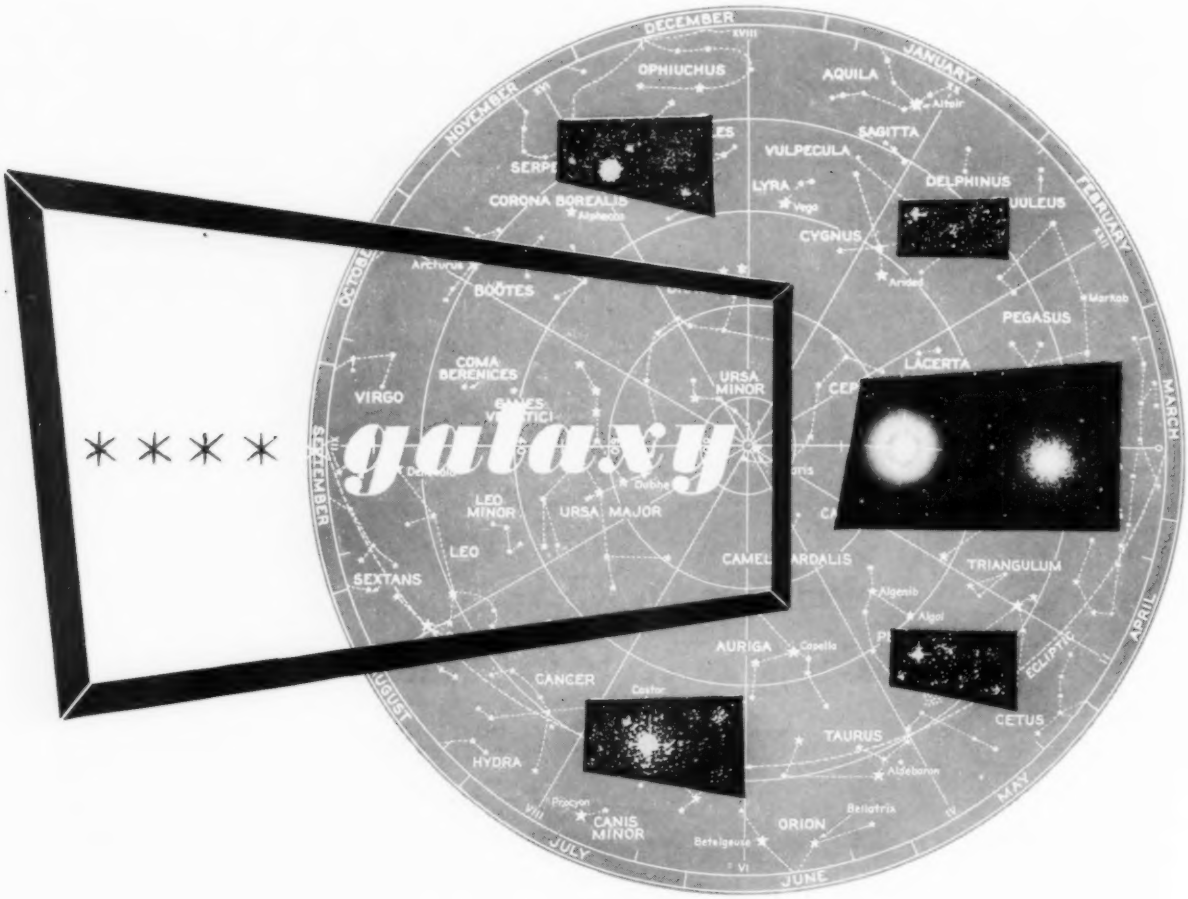

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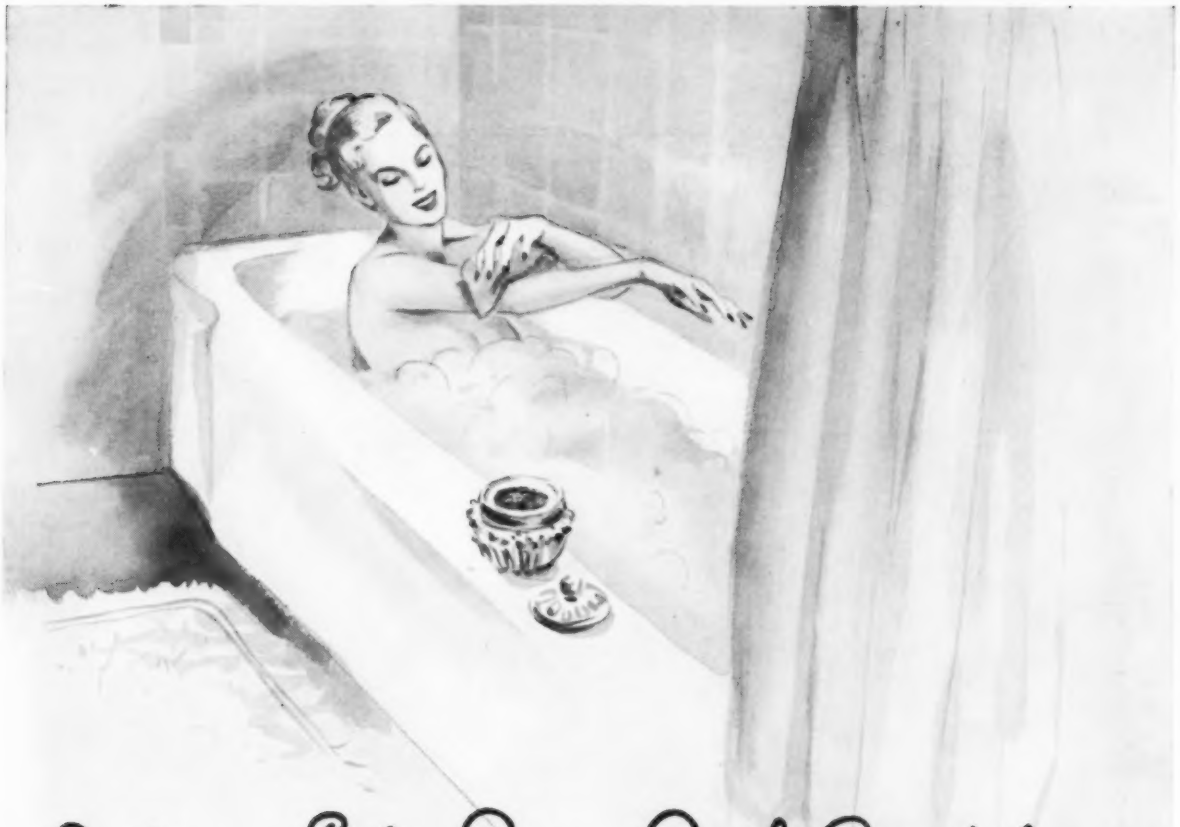

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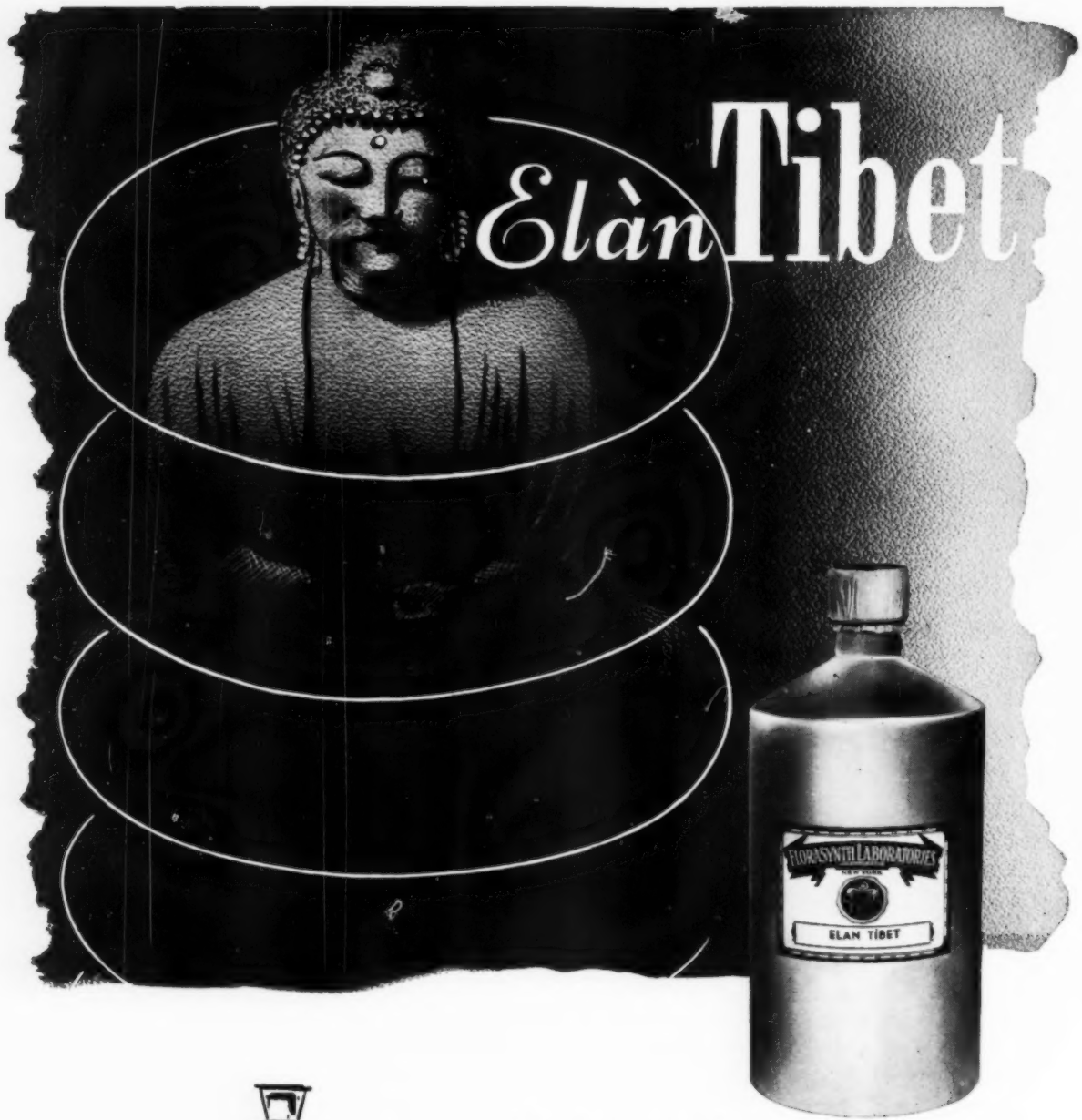

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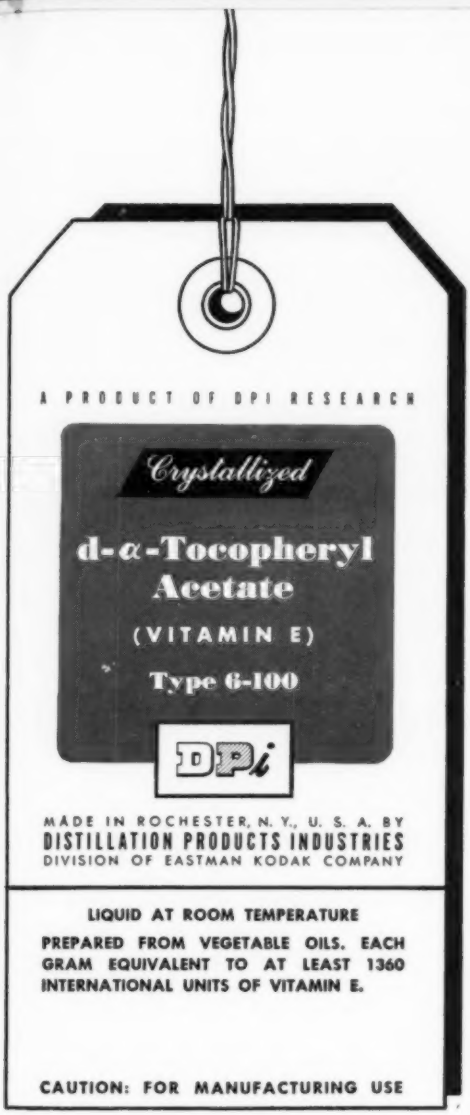
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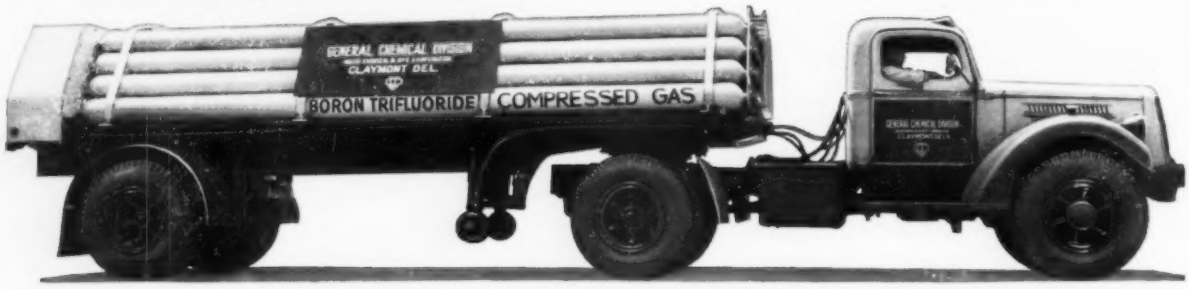

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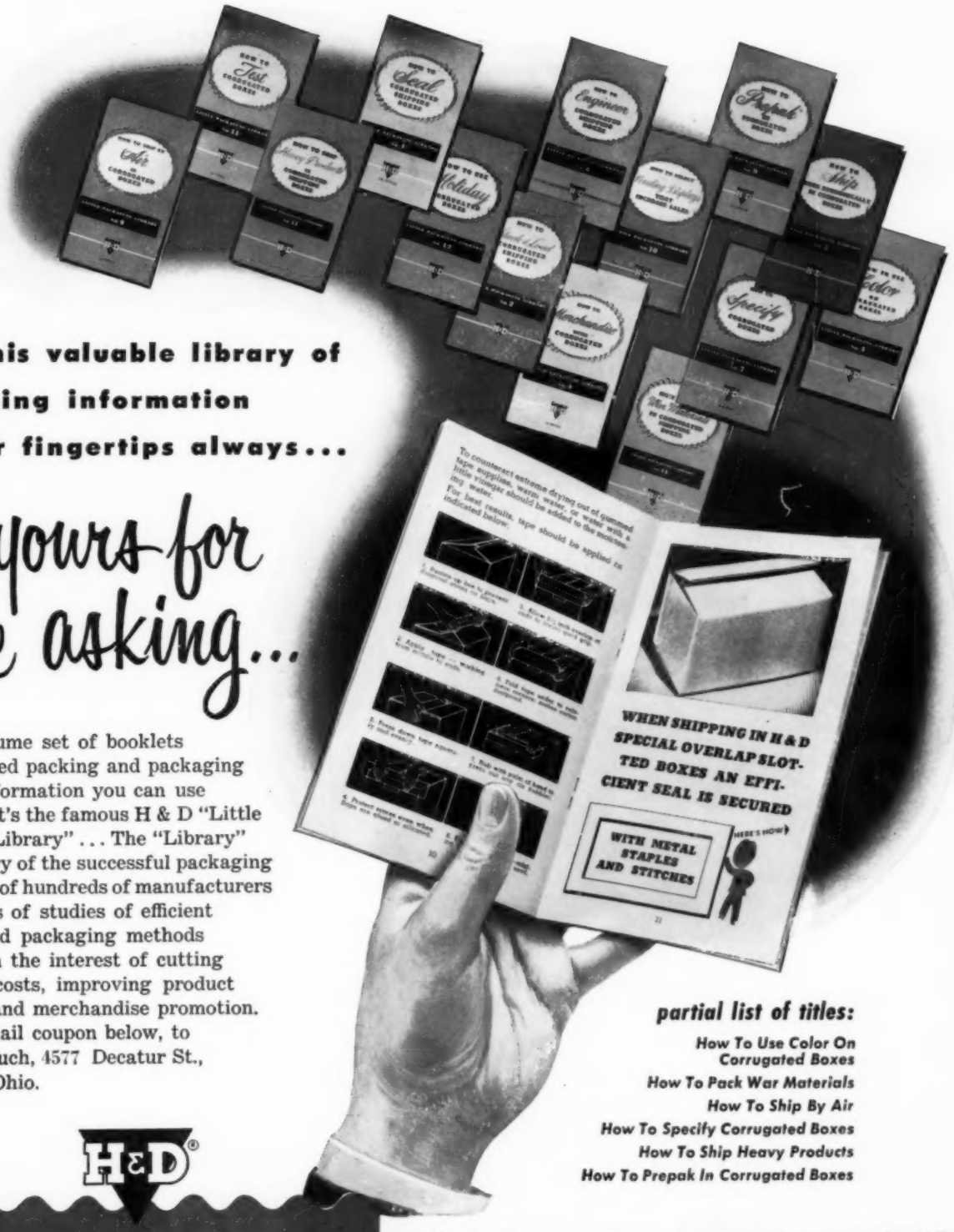

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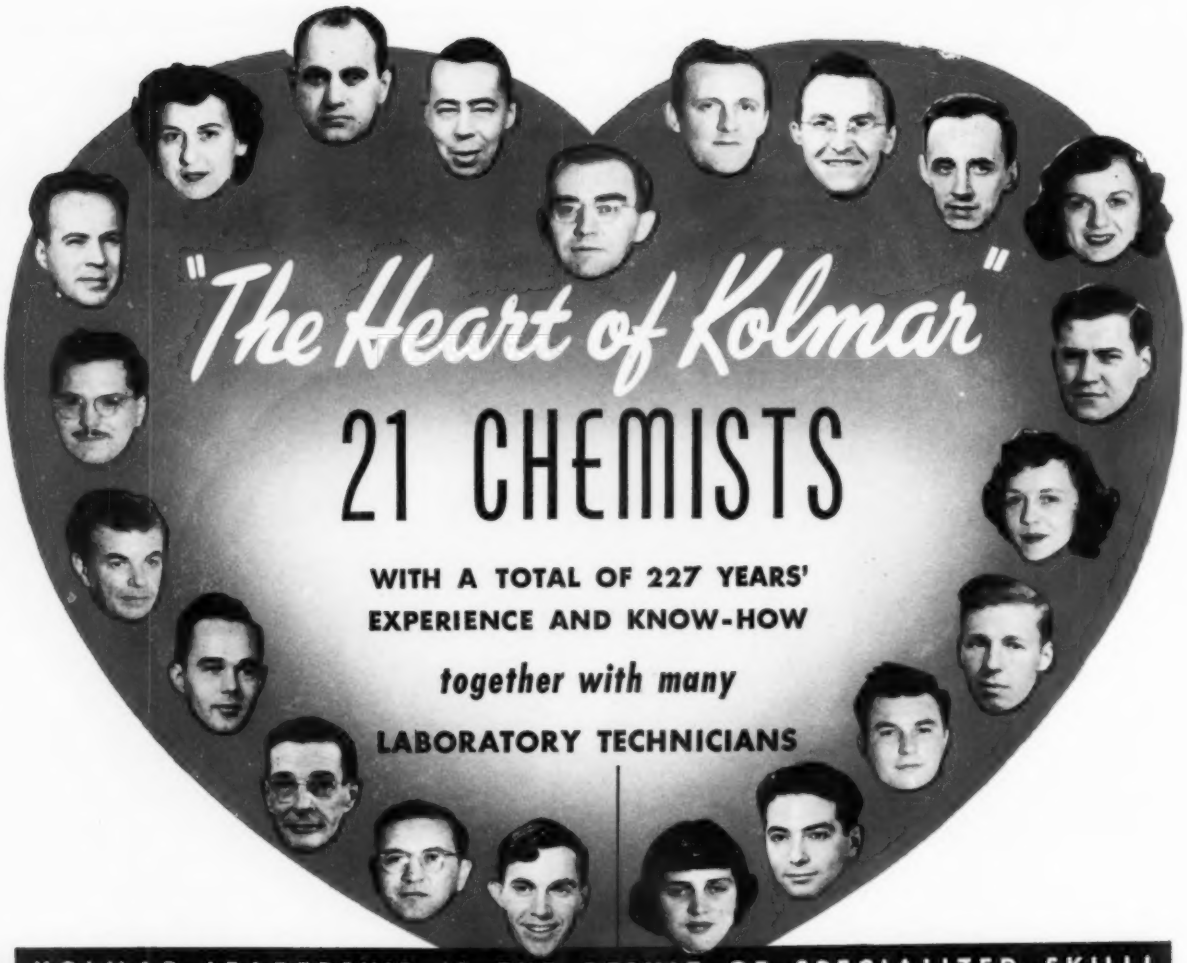
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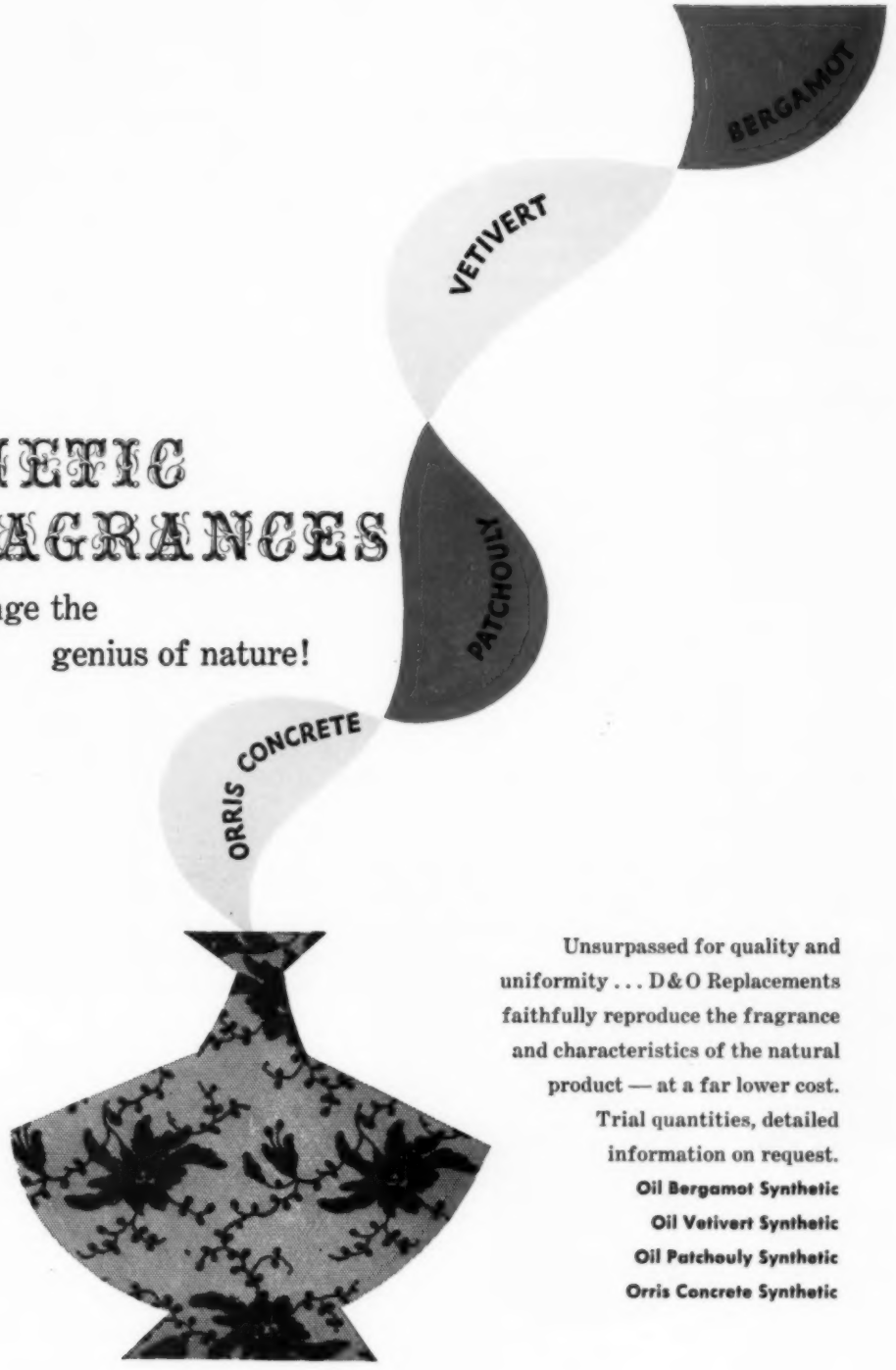

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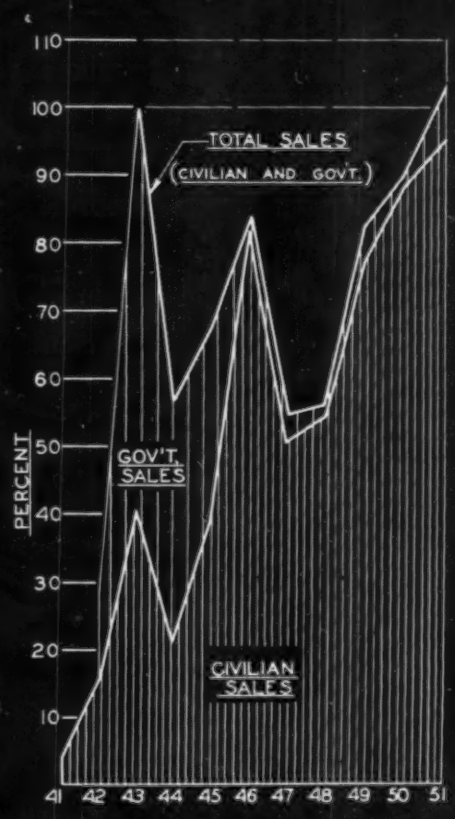

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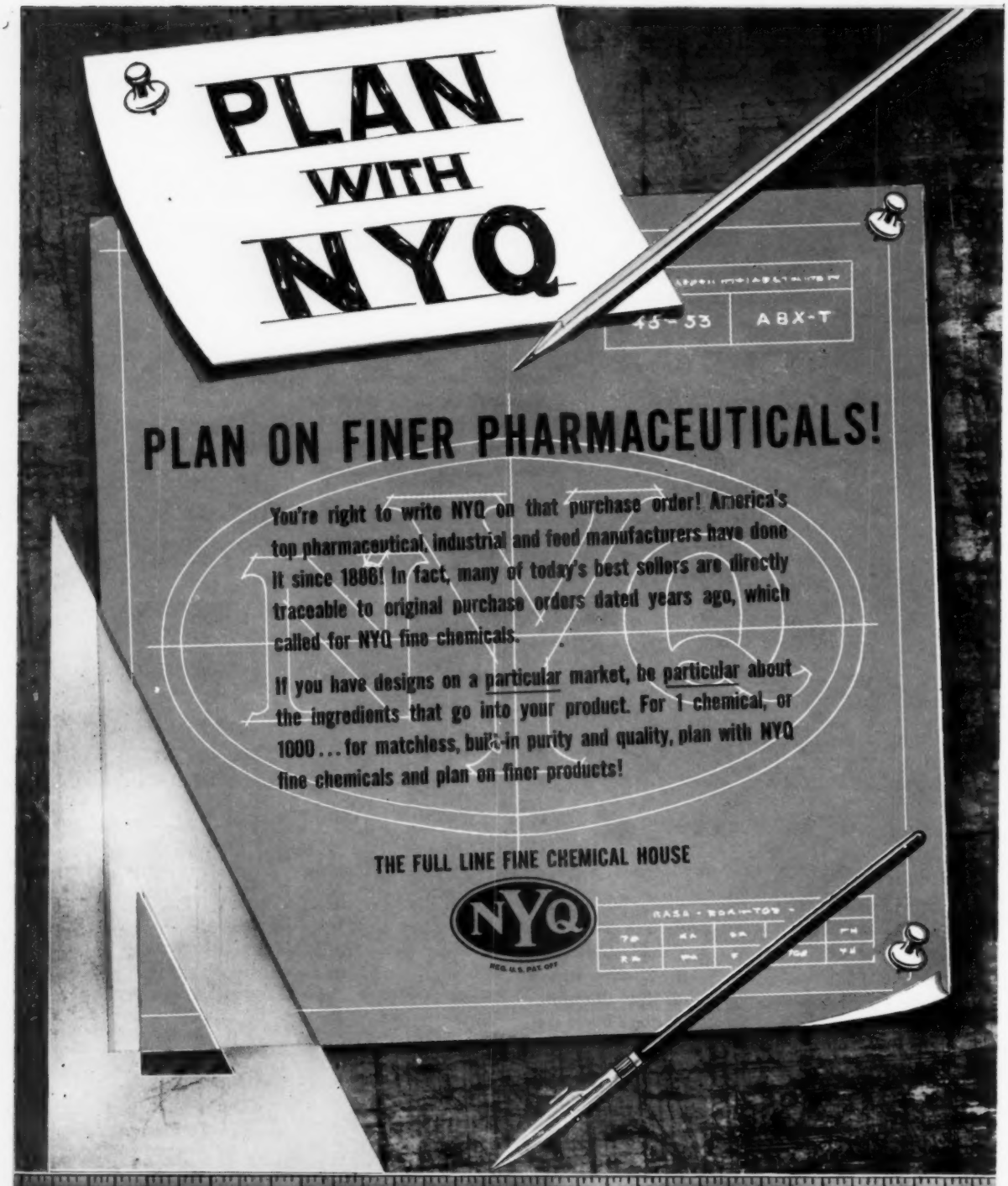
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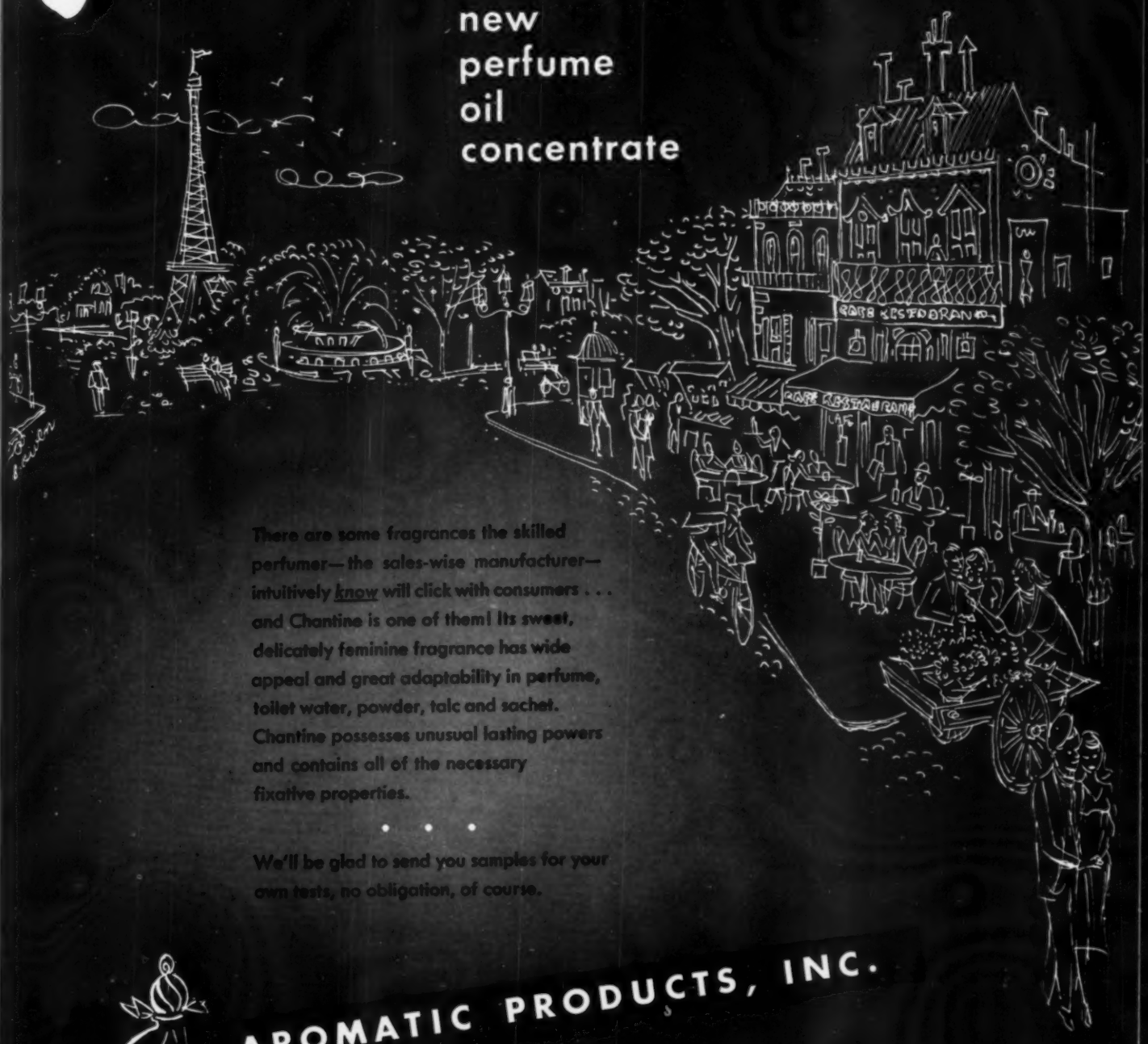

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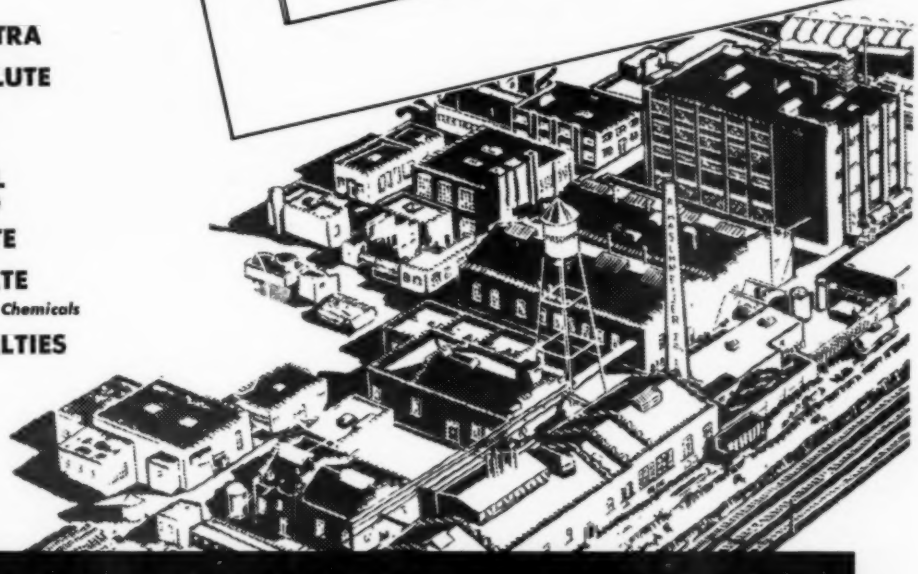

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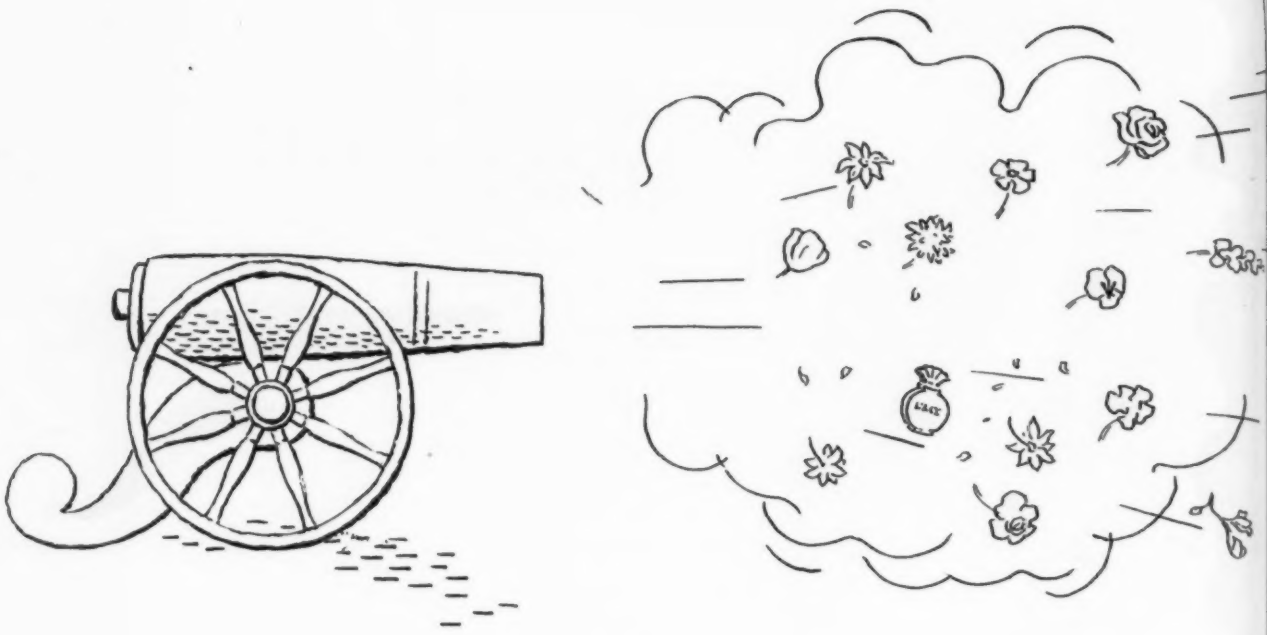

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Mallinckrodt Theophylline, packaged in 100-lb. leverpak drums and in 25-lb. fiber drums, is supplied in the following grades:

Theophylline USP XIV Monohydrate (Powder)
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"This isn't just like our antihistamine cold tablets. Anyway, we took them back, didn't we?"

Keeping Posted

West Virginia Pulp and Chalk

After being one of the original and one of the main suppliers of precipitated chalk to this industry, the Industrial Chemical Sales Division, West Virginia Pulp and Paper Company recently announced their intention to discontinue manufacture and sale of this product. Not only is the announcement of this fact of great interest, but the manner in which the company conducted itself in making this announcement should set a high standard for business conduct.

Before any word of the anticipated discontinuance of production of chalk was released, Joseph M. Wafer, vice-president of West Virginia Pulp and Paper Company in charge of the Industrial Chemical Sales Division, invited to his office one representative from each of the company's competitors in this product. These men were then given a copy of the news release in advance and they were told the complete story of why this action was being taken. Mr. Wafer states that it was felt that these competitors would respect the confidence imposed in them and it was also felt that it would be much better to tell the story direct to these competitors so that they could be prepared for any of the inquiries that would be placed on them. Mr. Wafer said he realized that after being so many years in the business and with the number of accounts that have developed, competition would naturally be wondering where the flock of inquiries originated.

Mr. Wafer says that each of these competitors respected the confidence placed in them and began to contact the trade. As a further service to the company's customers who would be required to seek new sources of supply, Mr. Wafer sent a letter not only telling of the discontinuance but also listing the names of competitors. In addition to this, the company, in its final advertisement on the product last month, listed the names of six competitors in the advertisement. And as a further service to the customers who had to find new sources, the company is continuing to supply chalk to those who want it for a period of five months after the announcement was made.

This we consider a most ethical code for such an undertaking.

Pfizer Inserts in A.M.A. Journal

Chas Pfizer & Co. has stepped up sharply the advertising of its antibiotic division to the medical profession. Beginning in the June 21 issue of the Journal of the American Medical Association, Pfizer inaugurated a program under which there will appear in the JAMA every other week a bound-in Pfizer publication called Pfizer Spectrum. This insert consists of 16 pages of which four are the covers in full color and of heavier weight than the other twelve pages. Color is used throughout Spectrum which consists of articles of current interest to physicians, interspersed with some Pfizer advertisements. Describing Spectrum, Dr. W. Alan Wright, Pfizer Director of Medical Service, says: "Spectrum is intended especially for physicians who want to keep abreast of medical developments . . . Spectrum will range far and wide, not only geographically, but in the various fields of medicine."

This is the first time that any such program has been accepted by the JAMA. It is understood that in view of the expense of this new program, there will be a cut-back in the amount of direct mail advertising to physicians used by Pfizer.

Upjohn Announces Cortisone

Last month the Upjohn Company announced that its previously announced process of producing cortisone with the help of fermentation was now in production and supplies were available for general distribution. With this announcement, Upjohn also noted that the product was being placed "on the market at 20 per cent below the prevailing price of approximately $30 per gram to the consumer." Upjohn also pointed out that this new process is adaptable to the production of such cortical steroids as hydrocortisone (compound F) and corticosterone (compound B). The cortisone available at the time of the announcement was bottles of 20 tablets of 25 milligrams each. The company said

that as production is stepped up, other forms will be made available.

The Position of Cortisone

The present position of cortisone was described by the Upjohn Company last month as follows:

Cortisone was first released for general hospital use in June, 1950. In the two years since then, it has won an established place (together with ACTH in many cases) in the treatment of some 22 diseases, and is widely used in about 15 others. In the first group are rheumatoid arthritis, acute rheumatic fever and other diseases of connective tissue; exfoliative dermatitis and a number of other skin disorders; blood transfusion reactions and erythroblastosis fetalis, the once-fatal infant disorder resulting from Rh-incompatibility of mother and child; acute iritis, acute uveitis and other eye inflammations that may lead to blindness; and adrenal and pituitary insufficiency. The second group includes gout, asthma, ulcerative colitis, surgical stress, the skin diseases psoriasis and pemphigus, chronic lung inflammations such as caused by beryllium dust, and nephrotic degeneration of the kidneys.

Recent estimates say there are 10 million people in the U. S. with disorders that might benefit from cortisone or ACTH. There are believed to be 2 to 3 million with rheumatoid arthritis; 1 million rheumatic fever sufferers; 4 million suffering from ulcerative colitis; 1,400,000 asthmatics; 840,000 with eye diseases; and 30,000 with Addison's disease.

An enormous effort has been expended on attempts to find out how adrenocortical hormones work. The adrenal cortex, however, guards its secret well; so far, comparatively little has been learned. All that is known at present is that adrenocortical hormones suppress inflammatory reactions. The latter occur whenever tissue is injured and take place in two stages. In the first, blood vessels dilate, fluid and white blood cells leak into the injured area, and the "ground substance"—the jelly-like "cement" that holds tissues together—liquefies. In the second stage, fibrous car tissue is formed. Cortisone and compound F block both stages of the inflammatory reaction, thus keep rheumatic joints, for example, free of scar tissue that would limit motion. But how this is accomplished remains a mystery.

Antibiotic Search Continues

Stating that "the advent of antibiotics has given pharmacy unlimited opportunities," and that the antibiotics "have narrowed still further the list of human afflictions for which no specific treatment is available," M. W. Dicks, of Parke, Davis & Company recently told the Montana State Pharmaceutical Association that "the search still goes on. Many antibiotics now under study may prove to be valuable therapeutic agents . . . One or more of these may be the answer to some disease as yet unconquered. The search will continue to go on, for the goal is life itself for the victims of such diseases." Mr. Dicks is assistant manager of the hospital and biological sales department of P.D.

Colgate Licensed for Chlorophyll

Colgate-Palmolive-Peet Company last month withdrew its patent suit against the Rystan Co. and has taken a license to market chlorophyll toothpaste and mouth wash. The Colgate suit, which sought to void U. S. Patent No. 2,120,667, held by Rystan, had been filed in the Federal Court of the Southern District of New York. It was withdrawn without predjudice. Rystan also announces that Whitehall Pharmacal (Kolynos), Zonite Products Co. (Forhan's), Craig-Martin and Walgreen, and more than a dozen other tooth paste and mouthwash manufacturers have been granted similar licenses.

Rystan, which in addition to U. S. patent and patents pending, owns over 25 chlorophyll patents in nine foreign countries, last year licensed Pepsodent Division of Lever Brothers for the U. S. and recently licensed Lever in Canada, England, France, Brazil and Australia. Zonite are licensed for the U. S., Canada, Brazil and Mexico. Negotiations are pending with these and other companies for rights in other countries in which Rystan owns patents.

With Chlorodent, Colgate, and Kolynos in the field, it is predicted that by the end of this year chlorophyll dentifrices will be the largest factor in the $100 million tooth paste market.

Disc Recording of Prescriptions

Proof of authorization by physicians to fill and refill prescriptions, required of druggists under the Durham-Humphrey Amendment to the Federal Food, Drug, and Cosmetic Act which permits telephoned prescriptions, is provided by recording these telephoned prescriptions on plastic discs. Recording of phone conservations is said to be admissable as legal evidence in many states. The machine records the conversation of the doctor and the druggist as the druggist fills in the prescription blank.

P. D. Folic Acid Patent Suit Dismissed

A suit on the manufacture and sale of folic acid, brought by Parke, Davis & Company against American Cyanamid Company was summarily dismissed before trial on June 10, by U. S. District Judge Lederle in Detroit, who held that American Cyanamid's synthetic folic acid does not infringe Parke, Davis's U. S. Patent No. 2,407,096, which claims a product derived from natural animal sources.

Dwarfies To Modify Ad Claims

Dwarfies Corp., Council Bluffs, Iowa, has stipulated with the Federal Trade Commission that it will stop representing that the preparation Dwarfies 10-Vitamins contains all the vitamins required in human nutrition or that all the vitamins in the preparation are known to be essential to human well-being. The company also agrees to discontinue the following claims:

That it will correct symptoms or conditions such as fatigue, exhaustion, poor digestion, nervous disorders, irritability, insomnia, aches or pains, weakness, loss of energy, night blindness or poor appetite.

That conditions or symptoms known as skin defects, eye troubles, poor digestion, nervousness, bad teeth, irregularity, loss of appetite, or fatigue are frequently or commonly due to vitamin deficiency or that use of the preparation will avert their development.

That vigor, vitality, increased energy, resistance, or a feeling of general good health will result from use of the preparation.

That the preparation is effective in correcting any vitamin deficiency symptoms except those due solely to lack of sufficient vitamin D.

According to the stipulation, the company advertised that "a majority of Americans are said to be undernourished because they do not get enough of the various vitamins" and "three out of four people need extra vitamins." It agreed to discontinue, by use of such phrases or in any other manner, exaggerating the frequency of occurrence of vitamin deficiency or the necessity for use of the preparation.

H. I. F. Summer Radio Series

Over 600 local radio stations from coast to coast, with an estimated potential listening audience of more than nine million, are scheduled for broadcast during the summer months of the Endless Frontier, a series of five half-hour documentary programs dramatizing latest achievements in medical research and produced by the Health Information Foundation. Raymond Massey is the narrator of the series which was originally broadcast earlier this year by one hundred NBC stations as a joint NBC-HIF presentation. Ben Grauer announces the series.

Stressing the teamwork of research workers, chemists, scientists, drug manufacturers, doctors, and countless others, the Endless Frontier includes Our Daily Bread, a program on nutrition; They Are Not Alone, on cancer; The Troubleshooters, on cortisone; Only One To A Customer, on heart disease; and Pfc Bill Smith, Man Alive, on new medical and surgical techniques developed on the Korean battlefront.

F.T.C. Cites N.H.A. Complex

National Health Aids, Inc., Baltimore, has been charged with false advertising of NHA Complex, a vitamin-mineral preparation. Included in the FTC citation are the company president, Charles D. Kasher, and Television Advertising Associates, Inc., both of the same address as the company. Radio and television commercials and other advertisements are said to have been prepared by the agency.

The FTC charges false claims that the product is a competent and effective treatment for and will cure arthritis, neuralgia, sciatica, lumbago, gout, bursitis, coronary thrombosis, rheumatism, high blood pressure, diabetes, bad bones, bad teeth, malfunctioning glands, infected tonsils, infected appendix, gallstones, eye trouble, overweight and goiter.

NHA Complex, the complaint says, is also advertised as an effective treatment and cure for neuritis, underweight, improper digestion and assimilation of food, constipation, indigestion, nervousness, lack of energy, vitality and ambition, grouchiness, and inability to sleep. However, the complaint charges, NHA Complex is of no value in treating these diseases, disorders, and symptoms except when they are due solely to mild vitamin and mineral deficiencies and then only when the preparation is taken continuously over a long period of time. The complaint alleges further:

"NHA Complex, used as directed, supplies only the minimum adult daily requirements of vitamins A, B_1, B_2, C and D and niacin and of iron and iodine, and, therefore, the preparation will not constitute a competent or effective treatment for diseases, disorders or symptoms caused by deficiencies of these substances except in the milder forms of such deficiencies where the continued use of NHA Complex over a long period of time may be beneficial. In severe cases of vitamin A, B_1, B_2, C and D and Niacin and of iron and iodine deficiencies, the amounts of these substances supplied by NHA Complex are insufficient to produce any significant beneficial effect."

Other claims charged to be false are: will make one well and keep one well; will supply sufficient quantities of vitamin B_{12} to be of value in treatment of diseases and disorders.

S. B. Penick, Jr.—Princeton Trustee

S. Barksdale Penick, Jr., president of S. B. Penick & Co., was one of three graduates of Princeton University who were elected charter trustees of the university by the board of directors at its commencement meeting held June 16. The other newly elected trustees are Dr. Karl T. Compton, former president of Massachusetts Institute of Technology, and now president of the corporation of M.I.T. and chairman of the Research and Development Board of the Department of Defense, and Timothy Pfeiffer, member of the law firm of Milbank, Tweed, Hope and Hadley, New York, long associated with various agencies of social service.

Caretta Joins F.T.C.

The Federal Trade Commission again has a full complement of five commissioners, Albert A. Caretta having been sworn in last month to fill the unexpired term of the late Commissioner William A. Ayres. The term ends September 25, 1954.

Born in New York City in 1907, the new commissioner has resided in Arlington, Va., since 1936. In 1930 he received his B.S. degree in government from the College of the City of New York. where for the next four years he taught courses in economics, evolution of American Industry, and money and banking. From 1934 to 1942 he was with the SEC in Washington, first as an expert statistician and later as a member of the legal staff. While working at the SEC he studied law at Georgetown University where he received his LL.B. degree in 1940. He is a member of the District of Columbia and Virginia Bar.

He resigned from the SEC in 1942 and went to the Office of Price Administration as assistant to the deputy administrator in charge ofthe rent department. After service in the Navy in 1944 and 1945, he returned to OPA for a brief period and then transferred to the Navy Department where he engaged in renegotiation work. He began private practice of law in Washington in 1947. He has taught corporation law and corporation finance at Catholic University since 1942 and has

conducted courses in the analysis of financial statements and in credits and collections at the foreign Service School of Georgetown.

Other members of the FTC are: Chairman James M. Mead, Democrat of New York; Lowell B. Mason, Republican of Illinois; John Carson, Independent of Michigan; and Stephen J. Spingarn, Democrat of New York. Mr. Carretta is a Democrat.

Georgia Pharm. Assn. Endorses Russell

We note with interest that the Georgia Pharmaceutical Association, for the first time in its history, has endorsed a candidate for political office. The candidate in question is Senator Richard B. Russell for the presidency. But the reasoning behind the move is interesting and we quote from the resolution:

"Whereas: A native son Richard B. Russell, a Southern gentleman, a world leader and a friend of Georgia drugdom, as was evidenced by his recent statement on 'Meet the Press' when he declared his support for the inalienable right of a druggist to operate his business as he pleases without duress of the Federal Government and in accord with the procedures of a system of free enterprise and the other democratic principles upon which our country was founded,

"Therefore Be It Resolved: That the Georgia Pharmaceutical Association in Convention assembled in Savannah, Ga., April 28th, 1952, hereby takes delight in breaking a long established precedent of not endorsing a candidate for political office and enthusiastically endorse the candidacy of Senator Richard B. Russell for the presidency of the United States and calls upon the druggists of Georgia and the nation to support to the fullest Senator Russell's candidacy."

The only point that we wish to make is that if the State of Georgia had been alert in enforcing its own laws there would have been no Sullivan decision, and it was the Sullivan decision which established the right of the Food and Drug Administration to take action in cases of the sales of drug products made at the retail level. The State of Georgia is not alone in this respect, but it must be realized that the failure of the states to enact and adequately enforce laws to control abuses in the sale and use of dangerous drugs brings about Federal action. The demand for Federal control of the illicit traffic in barbiturates is a case in point.

Lilly Broad Spectrum Antibiotic

Another broad spectrum antibiotic is now being clinically investigated. Called Ilotycin, and developed by Eli Lilly & Co., the product is said not to produce disturbing side-effects, although it appears to be as effective as many of the antibiotics now in use. According to the producer, tests indicate that use of Ilotycin is not accompanied by the allergic manifestations and gastro-intestinal side-effects which often result from use of some other antibiotics. The product also appears to be effective against many organisms which have become resistant to penicillin or other antibiotics, it is reported. An official of Lilly cautions, however, that even though the clinical trials appear encouraging, it will be several months before Ilotycin will be thoroughly tested and ready to be marketed.

Announced about two and one-half years after Terramycin, which followed Chloromycetin by about a year and one-half, which followed Aureomycin by about the same time, it would appear that close to two years is the time between these discoveries. Meanwhile, every leading manufacturer of antibiotics spends exceedingly large amounts of money day after day, screening soil samples in an effort to discover a new product. The few products that have resulted from all this effort surely justify the description given this search—namely that it is like playing a slot machine.

Bristol-Myers Facts

Antibiotic and ethical drugs accounted for 34.1 per cent of the sales of Bristol-Myers Company in 1951, compared with 25.2 per cent in 1950, 19.3 per cent in 1949, 16.7 per cent in 1947, and 1.5 per cent in 1944. As a result, the percentage of sales resulting from dentifrice, medicinal and toilet preparations has declined to 45.5 for 1951, against 51.1 per cent in 1950, 59.7 per cent in 1949, 59.9 per cent in 1947, and 71.0 per cent in 1944. Brushes and paint applicators accounted for 12.1 per cent of sales in 1951, 13.1 per cent in 1950, 13.3 per cent in 1949, 18.2 per cent in 1947, and 19.0 per cent in 1944. Collapsible tubes and condenser shells accounted for 8.2 per cent of sales in 1951, 10.2 per cent in 1950, 7.7 per cent in 1949, and 5.1 per cent in 1947. Bristol Laboratories, Inc.—the ethical division—manufactures and sells approximately 250 products, of which by far the most important is penicillin which is sold both in bulk and in various dosage forms to other manufacturers, and in many product forms under the Bristol trade-mark.

The Bristol-Myers Products Division manufactures and sells the following products which are listed in the order of their sales volume: Ipana, Sal Hepatica, Vitalis, Mum, Bufferin, Trushay, Minit-Rub, and Ingram Shaving Cream. It also distributes Ammens Medicated Powder, which is manufactured by Charles Ammen Company, a wholly owned subsidiary.

Rubberset, a wholly owned subsidiary, manufactures paint brushes, paint rollers and shaving brushes sold under the Rubberset name and various brand names. Sun Tube Corporation, a wholly owned subsidiary, manufactures and sells collapsible metal tubes and condenser shells, and other extruded metal containers. Approximately 26 per cent of the sales are sold to company for packaging various of its products, and the remainder are sold to competitors.

Between the years 1947 and 1951, sales of Ipana experienced a decline of approximately 16 per cent. The introduction of Resistabs in 1950 proved to be unsuccessful. However, new products introduced during this period—Vitalis Hair Cream, Bufferin, and Ammens Medicated Powder, have shown excellent sales trends. Total sales of the company were $61,616,962 in 1951; $52,266,448 in 1950; $42,777,942 in 1949; $44,645,570 in 1947; and $33,918,597 in 1944.

In the prospectus issued in connection with an issue of debentures and common stock, from which the above information was culled, the following statement appears:

"There have been two significant developments during recent years in the dentifrice, medicinal and toilet preparations field. The first of these is the accelerated

trend toward the distribution of these products through super markets and grocery outlets. This has placed increased emphasis on sales promotion at the point of sale and has intensified competition for retailer cooperation. The second development has been an accelerated introduction of new proprietary and toiletry products, many of which incorporated a suddenly popularized ingredient. Examples of this were the introduction of ammoniated dentifrices in 1949, of antihistamines (available-over-the-counter) in 1950, and of chlorophyll dentifrices in 1951. All of these items rapidly gained an important consumer acceptance. Although the Company did not aggressively enter the ammoniated dentifrice field, it was one of the first licensees under the ammoniated dentifrice patents of the University of Illinois Foundation, and has conducted extensive tests on both ammoniated and chlorophyll dentifrices. As a result of this work, the Company has recently introduced Ipana Ammoniated Chlorophyll Tooth Paste . . . which is expected to help the Company achieve its former position in the dentifrice market."

Delaney Committee Would Amend Law

The Delaney Committee, or as properly called the House Select Committee on Chemicals, has issued its report on its investigation of the use of chemicals in cosmetics. The Committee states that there are about 700 chemicals used in foods, and that there are probably twice that number used in cosmetics.

The recommendation of the Committee is that the Food, Drug, and Cosmetic Act be amended in a manner patterned after the new drug section of the act. This amendment would also require a listing of ingredients in the labeling which would be of assistance to the allergist in treatment of patients reacting unfavorably to the use of particular cosmetics. The Committee also recommends that soaps be included in the definition of cosmetics under the act.

The Committee did not draft an amendment to incorporate its proposed changes into the Act. But no matter when this is done, it will be impossible to have any action on the matter during the present session of Congress because of the rush for adjournment in this election year. Therefore, the amendment will have to be introduced into the new Congress which will be elected this coming November and which will be called into session next January. The industry will, therefore, have this time to get ready for the fight caused by the attempt to thus amend the law.

The following excerpts are from the Committee report:

"The evidence has convinced this committee that a number of cosmetic companies are not adequately testing their preparations; that the public is entitled to greater protection with respect to products as widely used as cosmetics; and that such protection is not afforded by existing legislation, under which a manufacturer may be punished, and his product seized, after injury has occurred. Your committee recommends, therefore, that the Federal Food, Drug, and Cosmetic Act be amended to require that cosmetics be subjected to essentially the same safety requirements as now apply to new drugs. Under such an amendment, data would not be required to be submitted to the Food and Drug Administration with respect to cosmetics which are generally recognized by qualified experts as safe under the conditions of use for which they are sold. Adequate provisions for a comprehensive judicial review of administrative decisions should be included in such an amendment. . . .

"The Federal Food, Drug, and Cosmetic Act defines a 'cosmetic' as any article intended to be rubbed, poured, sprinkled, sprayed on, introduced into, or otherwise applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance. While this obviously encompasses soaps, the act specifically exempts such products from the definition of cosmetics and, consequently, from the coverage of the statute. Thus, a law which provides some protection to the public in their use of cosmetics removes from the scope of this protection the cosmetic which is used more frequently, by more people, and applied to larger areas of the body, than any other cosmetic in existence.

"Soaps which have been on the market for years, and are generally recognized by competent authorities as being safe, would be unaffected by pretesting legislation. As indicated, however, inadequately tested hair shampoos have caused injury to the eye. There is an even greater possibility of injury from soaps containing new ingredients, for soaps are used to wash the face and, therefore, more readily make contact with the eye than do shampoos. Soaps are also frequently employed as a shampoo. Representatives of cosmetic manufacturers who market soaps testified that their companies test soap as vigorously as other cosmetics, and that there is no sound reason why the same precautions should not be taken for both. Your committee is of the opinion that the Federal Food, Drug, and Cosmetic Act is in need of amendment to bring soaps within the definition of cosmetics. . . .

"It is the committee's view, however, that a list of ingredients need not in all cases be physically affixed to the cosmetic. Where the number of ingredients is quite large, the list can be contained, in most instances, in the cosmetic package in the form of an accompanying circular. This constitutes 'labeling' under the Federal Food, Drug, and Cosmetic Act. Such a circular would not affect the attractiveness of the cosmetic package and would serve a most useful purpose.

"The act presently provides, in the case of both drugs and foods, for the establishment of exemptions by regulations where the Food and Drug Administration determines that compliance with the labeling provisions is impracticable. A similar provision should be made in the case of cosmetics. It is the recommendation of the committee that the act be amended so as to require the labeling of cosmetic ingredients, with provision for exceptions where required. . . .

"It is this committee's considered opinion that the exemption in the Federal Food, Drug, and Cosmetic Act with respect to the use in cosmetics of coal-tar dyes should be modified to bar those which are determined by regulation issued by the Food and Drug Administration to contain the greatest potentiality for harm. Provision should also be made whereby those cosmetic preparations containing coal-tar dyes which are dangerous but are permitted use in cosmetics should bear a specific warning that, regardless of the purpose for which the cosmetic is employed or the area where applied, it must be kept out of the eyes or blindness may result."

by Millon A. Lesser

Pros and Cons of Chlorophyll as a Deodorant

Again the industry is shaping one of those patterns that have become all too familiar during recent years. This time it is concerned with chlorophyll but the outlook is much broader than when the ammoniated dentifrices and antihistamines were the subjects of interest. This broader view stems from the fact that chlorophyll offers the promise of relief from body and other odors. We Americans, as a nation, have a decided dislike for unpleasant smells, especially those of a personal nature.

Although the deodorizing potentialities of chlorophyll preparations were known as far back as 1940,[1] broad interest in this property was not aroused until the publication of Westcott's[2] findings in March, 1950. Subsequently, the expansion of chlorophyll uses was greatly accelerated when de Kruif wrote about "nature's deodorant" in the August, 1950, issue of *Readers' Digest*. Since then chlorophyll preparations "have taken a rather important place in the social hygeine and cosmetic life of the country."[3]

In a matter of months, dozens of new chlorophyll-containing products have appeared on the market. Most of them appeal to the public's fear of offensive personal odors and they offer deodorizing effects that literally extend from head to foot; ranging from chlorophyll-containing shampoos to chlorophyll-treated shoe pads. In addition to the ethical ointments and solutions for treating wounds, burns and the like that have been available for about a decade, the ever-growing list includes such varied items as deodorizing tablets for internal use, dentifrices, breath-deodorizing tablets and lozenges, mouthwashes chewing gum, indigestion tablets, "periodic" pain pills, reducing pills, suppositories, hard candy and cigarettes. The list also includes shampoos, deodorant colognes, stick deodorants, soaps, after-shave lotions, bubbling baths, hair restorer, face creams, skin ointments, foot lotions and shoe pads and insoles. In addition to chlorophyll-containing dog foods, there is an insect powder for combing through the family pet's fur that is claimed to simultaneously deodorize and deflea the animal.

Aside from these more or less personal applications, there are a number of chlorophyll-containing preparations that aim at freshening and purifying the atmosphere. Among them are wick-type and spray type air deodorizers, para dichlorobenzene blocks and crystals, scented candles and, most intriguing, chlorophyll-treated toilet tissues.

Obviously the number of products using chlorophyll will continue to increase, at least for a while. Some idea of the progress already made is shown in estimates[4] that the consumer market for chlorophyll products

BLACK STAR PHOTO

has attained a $50,000,000 annual total. This figure, it is predicted, may double or triple within the next few years. However, the future of these products is being jeopardized in many cases by unjustified, exaggerated, and even rediculous claims that cannot go long unchallanged.

The very fact that so many and such varied products have been rushed to the market to take advantage of the chlorophyll story is causing concern in some quarters and skepticism in others. Although a good deal of positive data have been accumulated regarding the deodorizing action of chlorophyll, there is no doubt that many products are now being merchandized as deodorants without adequate proof of their efficacy for this purpose.

Aside from this lack of proof, there is a failure on the part of the public, including many technical men, to appreciate some of the factors involved in the all-over picture. Many people do not realize that the chlorophyll used for deodorizing purposes is not "as found in nature." This lack of understanding is reflected in statements about the odor of grass-eating animals and in jingles like the following one by Richard Armour of the *Wall Street Journal*:

IT MAKES SCENTS

Why reeks the goat
On yonder hill
Who seems to dote
On chlorophyll?

As remarked by Mitchell,[5] it is no exaggeration to say that natural chlorophyll is one of the most essential substances in the world ranking, for instance, with water or oxygen in importance. Without chlorophyll and its essential role in photosynthesis, says he, life as we know it could not exist.

However, as it naturally exists in plants, chlorophyll is an oil-soluble substance that is relatively unassimilable in the alimentary tract.[6] Therefore, as noted by Tebrock,[7] it is absorbed as such in quantities far too minute to have any deodorizing effect. Although oil-soluble forms have been employed for medical purposes in the past,[8] current interest and use is centered around the water-soluble derivatives of chlorophyll, known collectively as chlorophyllins. These water-soluble derivatives are the most useful therapeutically and are also the most active in topical and systemic deodorization. It will be understood, therefore, that when the term chlorophyll is used in this discussion (unless otherwise indicated) it refers to these water-soluble forms and particularly to the copper salt.

Although other chlorophyllins have been used on occasion,[1] sodium copper chlorophyllin is by far the most used of the water-soluble chlorophyll derivatives. Methods for preparing this compound are described in a number of sources, including a concise booklet prepared by Wall[9] of the U. S. Department of Agriculture. As noted by Mitchell,[5] the water-soluble chlorophyllins are available in various forms and strengths. Liquid or semifluid forms usually contain water, hence they must also contain a suitable proportion of glycerine or other preservative. Granular or powdered forms are also available; the granular type being particularly suitable for the preparation of tablets. Reputable brands of chlorophyll are generally offered in definite grades of standardized strengths.

Even though there now is rather general agreement concerning the kind of chlorophyllin best suited to therapeutic and deodorizing applications, the same cannot be said in many cases, with respect to the optimal

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by Thomas Cifelli, Jr.
PATENT ATTORNEY*

"Cold" Wave Patent Situation Is "Hot"

It will be recalled that these columns, in the January, 1951 and January, 1952 issues, reported rather fully on the McDonough cold wave invention culminating finally in the issuance on December 4, 1951 of U.S. Patent 2,577,710 and 2,577,711. It was also reported that on the same day that the patents issued suits were brought in the District of Columbia to enforce the patent and suits were filed in New York to have the patent declared invalid.

The situation at the present time, insofar as is publicly known, is that the Washington suits have been dropped and all appearances are that the legal battle will actually be fought in the New York federal courts. Indeed, a recent decision by Irving R. Kaufman, New York District Judge, while it merely deals with what are called interlocutory matters, that is, merely motions, nevertheless is believed to be of far-reaching interest to the readers of this publication.

The writer approaches the present task with care. On the one hand, he believes that the factual information publicly available should be given the widest possible dissemination, involving as it does a question basic to the entire cold wave industry. On the other hand, since the case is still in a pending status before the lowest federal court, any comments and conclusions would seem to be not only premature but indelicate. To further complicate the writer's task is the fact that the readers obviously are not interested in the formal, legalistic aspects involved in this litigation but rather in the practical, technical features. Consequently, it would appear that all purely legalistic matters should be omitted. However, when it is considered that these matters are closely interwoven with the practical considerations, the real dilemma becomes clear for all to see.

With the foregoing in mind, an attempt will here be made to convey to the reader as much of the opinion of Judge Kaufman as is believed will be of real interest to the reader. It is hoped that the omission of any part of Judge Kaufman's opinion will not in any way cause erroneous implications to arise.

Judge Kaufman's decision involves two actions against Sales Affiliates Inc. brought in New York for a judgment declaring the McDonough patent, U.S. 2,577,710, to be invalid. One of the actions was brought by Helene Curtis Industries Inc. and the other by Gilette Safety Razor Company. Sales Affiliates, who prosecuted the McDonough patent application, filed motions for summary judgment. Helene Curtis and Gilette both filed motions to refer the cases to a master and for injunctions against the prosecution of other suits by Sales Affiliates. Walgreen Drug Company of Texas and Skillern & Sons Inc. also filed motions for permission to become parties to the New York suits and asked for injunctions against the prosecution by Sales Affiliate of another suit in Texas. Judge Kaufman denied Sales Affiliates' motion and granted the motions of the other parties substantially as requested.

Everything that follows is taken from Judge Kauf-

*Newark, New Jersey

man's opinion, the language being his. The only liberties which have been taken have involved omissions of matter not believed too germane for the purposes of this article, in view of space and other considerations. For those who wish to read the entire opinion of Judge Kaufman, they are referred to 93 United States Patent Quarterly 399 to 414, inclusive.

The Motions Before This Court

1. Sales Affiliates moves under Rule 56, Federal Rules of Civil Procedure, for summary judgment in its favor dismissing the complaint of Helene Curtis Industries, Inc. (hereinafter referred to as Helene Curtis) in Civ. 71-280, a declaratory judgment action now pending in this district.

2. Helene Curtis moves:

(a) for leave to file and serve an amended complaint in Civ. 71-280 adding as a party plaintiff Helene Curtis Sales, Inc.;

(b) for an expeditious hearing of Civ. 71-280 under Rule 57, Federal Rules of Civil Procedure;

(c) for an injunction restraining Sales Affiliates from proceeding in Civ. 4605 in the United States District Court for the Northern District of Texas, Dallas Division and from intimidating customers of Helene Curtis by threats of commencement of suits against them for infringement of the patent in suit.

3. Sales Affiliates moves under Rule 56, Federal Rules of Civil Procedure for summary judgment in its favor dismissing the complaint of Gillette Safety Razor Company (hereafter referred to as Gillette) in Civ. 71-284 which is also a declaratory judgment action now pending in this district.

4. Gillette moves:

(a) for an injunction restraining Sales Affiliates from prosecuting Civ. 4606 in the United States District Court for the Northern District of Texas, Dallas Division and from intimidating customers of Gillette by threats and commencement of suits against them for infringement of the patent in suit;

(b) granting Civ. 71-284 a trial preference in this district under Rule 57, Federal Rules of Civil Procedure.

5. Walgreen Drug Company of Texas (hereafter referred to as Walgreen) and Skillern & Sons, Inc. (hereafter referred to as Skillern) move:

(a) for an order granting them leave to intervene in Civ. 71-284;

(b) for an order staying Sales Affiliates from proceeding in the Texas action, Civ. 4606 in which these movants are defendants, until the final disposition of Civ. 71-284.

6. Helene Curtis moves for an order referring Civ. 71-280 to a master under Rule 53(b), Federal Rules of Civil Procedure, the reference to include all motions previously made except Helene Curtis' motion to enjoin Sales Affiliates in its Texas suit, Civ. 4605.

7. Gillette moves for an order referring Civ. 71-284 to a master under Rule 53(b), Federal Rules of Civil Procedure.

History of the Patent in Suit

The patent in suit is No. 2,577,710. Application Serial No. 398,325 therefor was filed in the U.S. Patent Office on June 16, 1941 and the patent was finally granted on December 4, 1951, issuing in the name of Proctor & Gamble as assignee. It covers a certain composition for so-called "cold" permanent waving solutions invented by Everett G. McDonough. All the parties appear agreed that cold permanent waves have revolutionized the mode by which the women of America, and, it is added, of most of the civilized world, improve upon nature's bounty. The cold wave technique seems to have superseded an earlier "hot" wave method. An alleged quarter of a billion dollar industry has been built upon this new technique.

The history of the patent application is germane because of certain events which transpired during the course of its ten-year pendency in the Patent Office. While the patent application was awaiting disposition, McDonough assigned to Sales Affiliates the entire right, title and interest to the patent application. Thereafter, Sales Affiliates prosecuted it through the Patent Office.

On January 27, 1948, Sales Affiliates and The Procter & Gamble Company entered into an agreement under which Procter & Gamble agreed to pay "as advance royalties" the sum of $300,000 in exchange for certain benefits which included Sales Affiliates informing Procter & Gamble of its technical and promotional knowledge of cold hair-waving compositions. In this connection, Sales Affiliates issued to Procter & Gamble a nonexclusive license to make, use and sell hair waving compositions under the patent application. The license embodied provisions for royalties to Sales Affiliates and gave Procter & Gamble a preferential royalty position as against any other licensees. The agreement further provided that in the event of an assignment to Proctor & Gamble, "and during the period in which title is vested in Procter", Sales Affiliates was to retain the right to prosecute the application, to grant licenses consistent with the agreement, and to bring and defend suits on the assigned patent or application "in the name of Procter, if necessary, but at the expense of Affiliates, and [Sales Affiliates] shall be entitled to any recovery therefrom."

On July 22, 1949 these provisions were embodied in a mortgage assignment, to which Sales Affiliates and Procter & Gamble were signatories. By its terms Sales Affiliates assigned to Procter & Gamble the "entire right, title and interest" to the patent application until Sales Affiliates repaid the funds advanced to it under the January 27, 1948 agreement. The mortgage assigned, however, explicitly reserved to Sales Affiliates the right to grant licenses under the application as well as the rights to sue at its own expense as described supra. The assignment was duly recorded in the Patent Office.

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CULVER SERVICE PHOTO

by Arthur H. Bryan
CITY COLLEGE, BALTIMORE 18, MD.

Kissing Bugs

1. A study of the bacterial flora of the mouth and lips.
2. The effect of oral hygiene and lip sticks in lowering their incidence.

Introduction: We have all seen movies and television shows in which the germ conscious hypochondriac maiden meticulously sprays her mouth and throat after each osculation. She takes the job out of kissing by insisting on her boy friend disinfecting his lips as a preliminary to each episode too. Is she justified in her prophylactic procedure?

The Problem: In an effort to ascertain the extent and kinds of bacterial flora which live, grow and die on the lips under varying conditions, some simple experiments were carried out in an effort to provide an answer to the age old problem "to kiss or not to kiss, that is the question!"

Method: Standard nutrient agar and blood agar plates were prepared, sterilized and poured into sterile petri dishes. For economy, the plates were divided into four quarters.

Technique #1: Volunteer students and others, with and without colds, with and without lip stick, before and after retiring for the night, smokers and non-smokers, before and after tooth and mouth washing, dry and moist lips; impressed their lips for varying periods of from 1-10 seconds twice on the surface of the culture media, and their categories recorded.

Technique #2: Lips were washed with 5 cc. of sterile water for five seconds and one-half cc. of the wash water poured plated. In both 1 and 2, the plates were incubated at room or body temperature from 48 to 72 hours, and statistically classified under the aforementioned categories. Colony and differential counts were made and possible pathogens identified. Then from the evaluation, statistical data was obtained and some tentative conclusions drawn.

Technique #3: Direct moist lip smears were made on microscopic slides, and stained with grams iodine or methyline blue. Direct comparative bacterial counts were made and results recorded from the microscopic observations.

Technique #4: The author's previous published correlated works over a period of several years were re-evaluated in connection with the present problem (see Bibliography).

Results: (1) The number of colonies of bacteria per pair of double lip impressions varied from 25 to over 278 with a ratio of over 1:5 rough to smooth colonies.
(2) The number of possible pathogens, pin point, hemolytic and non-hemolytic colonies which on staining showed up as various micrococci were from 15-272 approximately, and were constant invaders. The average was around 100 per lip impression.
(3) The number of aerophytes or air bacterial spreaders varied from 1-12. (Could be contaminants).
(4) Avirulent micrococci dominated the flora. The number of hemolytic streptococci as pathogens varied from none to scores in persons with colds.
(5) The number of viridans strains of streptococci varied from none to twelve.
(6) Yeast and mold colonies were negligible to a few.
(7) White mucoid staphylococcus albur colonies were frequent invaders and fair constant on all samples, averaging around twenty.
(8) Miscellaneous gram negative bacilli were encountered. We made very few acid fast stains, but assumed the presence of tubercle bacilli in positive sputums and thence to the lips (medical literature).
(9) No spirilla were encountered except in an old case of vincent's angina.
(10) We were unable to do much work with the viruses, except that we know through previous literature that kissing may be the fomite of infection in colds, influenza, virus "X", viral and pneumococcic pneumonia, and upper respiratory infections, etc.
(11) Clinical experience revealed that fever blisters, cold sores (herpes fibrilis), can be definitely transmitted by prolonged osculations.
(12) Direct smears showed flora of gram$^+$ bacilli, very few gram-rods, many and varied types of gram$^+$ and a few gram-micrococci. Mold and yeast cells were rarely found. A few aerobic spore bearers were usually present while anaerobic spore bearers were only identified occasionally. (Contaminants?)
(13) Individuals ran fairly constant lip flora, when taken at the same time and place so that comparative estimates were possible.

Presumptive Interpretation of Results:

(1) The number of bacteria transferred from lips to culture media was directly proportional to how long a single kiss lasted. A regulation Hollywood ten-second-kiss transferred almost twice as many germs as a short two-second affair.
(2) Fresh woman's lip stick apparently lowered the bacterial count when numerically compared with naked lip counts.
(3) Men's antiseptic lip stick with various antiseptics incorporated definitely lowered the incidence of herpes fibrilis cases (cold sores) (inferred from questionnaire).
(4) Good antiseptic lip stick, when freshly applied, lowered the incidence of bacterial flora, particularly the micrococci to almost sterility for two or three hours, only a few large spore bearing gram$^+$ bacilli surviving.
(5) Recent smoking appeared to lower the bacterial count somewhat, particularly if the lips were dehydrated. However, the possible irritation of the buccal membranes by nicotine and hot tobacco smoke could nullify these effects?
(6) Dry lips harbored consistently fewer bacteria than moist.
(7) The bacterial flora was consistently higher upon rising in the morning and dropped considerably after completing the usual morning toilet (mouth wash, tooth brushing, soap ablutions of the face), and in women after fresh lip stick application.
(8) Alcohol beverage drinking gave inconclusive results with the few samples taken. However beer appeared to raise, and hard liquor to lower the comparative data germ counts.
(9) High bacterial lip counts and bad breath showed a very positive correlation. Sweet lips and sweet breath make a good team bacteriologically speaking.
(10) Low bacterial counts were directly proportional to odorless breath (garlic and onion odor possibly excepted?)
(11) The kiss of death is a distinct hazard when fatal infections such as: meningitis, diphtheria, scarlet fever, phthis, acute pulmonany tuberculosis, hemolytic strep throat, etc., are involved. (See medical literature).
(12) Over 95 per cent of the lip flora of bacteria were avirulent, hence non-disease inciting. They exist apparently as harmless commensalists.
(13) Old persons consistently harbor more lip and mouth germs than young persons.

Presumptive Conclusions:

(1) Kissing can be not only a pleasant, but harmless pastime if ordinary lip and oral hygiene is practiced, and that irrespective of the frequency or how long the contact lasts (see #12).
(2) Antiseptic men's lip stick is an excellent prophylaxis against fever blisters and cold sores, pathogenic micrococci and other potsible lip transmitted infections.
(3) Women's lip stick tends to accomplish the same effects as men's (women rarely suffer from lip sores). If they want added safety, a mild, non-irritating pleasant tasting antiseptic might be incorporated in some lip sticks by interested manufacturers.
(4) *The Ideal Antiseptic* in a lip stick, male or female, should be (a) cool, (b) non-irritating, (c) inhibitory, not necessarily germicidal to bacterial and viruses, (d) compatible with other ingredients, (e) very mild, (f) impart pleasant odor and taste, and (g) have sustained activity and no deterioration.
(5) When kissing is physically nauseating due to filthy contacts, you can bet it will be bacteriologically contra indicated also.
(6) The advertising slogan "kissing sweet" when applied to breath and lips is a hygienic must.
(7) Babies should not be kissed on the lips under any circumstances by children or adults. Ask your pediatrist (baby doctor).
(7a) Chlorophyll, the new green deodorant reported in the *Readers Digest*, 1951, P. DeKruif, has been

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Figure 1

Normal eye mucosa of the albino rabbit. (Purpose of the slide is to show the normal cornea, iris and conjunctivae (no treatment).

Surface Active Agents and the Eye*

by J. H. Draize and Elsie A. Kelley

DIVISION OF PHARMACOLOGY, FOOD AND DRUG ADMINISTRATION, FEDERAL SECURITY AGENCY, WASHINGTON, D. C.

Although surface active agents represent a relatively new development in the field of synthetic chemistry, at present more than a thousand such preparations are known. Such an agent is a subtance which when added to a system of one or more interfaces has the property of orienting itself in such a manner as to act as a coupling agent bringing the interfaces in more intimate contact. The majority of surface active agents are not pure chemical compounds but are derivatives or a condensation of several compounds and are designated in many cases by a general empirical formula.The slight variations in composition or lack of exact chemical definition may account for variations in toxicological behavior between lots or batches of a given agent.

Surface active agents have been classified into three broad groups depending on their ionization characteristics and behavior, namely, cationic, anionic and nonionic. Although all these agents have properties in common, some behave predominately as emulsifiers, others as penetrating and wetting agents, some as detergent and foaming agents, and some even as germicidal agents. Because of these properties these agents are finding ever wider use in cosmetic preparations. Their use in such cosmetic preparations as hair shampoos, bath preparations, wave lotions, etc., has led to a number of serious eye injuries.

Technics of Tests on Eye Mucosa

In general the technics of tests as published by Draize et al[1] for testing the irritancy of substances on the eye mucosa are followed. According to these technics the lesions or reactions observed in the cornea, iris and the palpebral and bulbar conjunctivae are scored separately. In this method of assigning numerical scores to the lesions observed, approximately 80 per cent of the weight is given to the cornea and iris, those structures of the eye seriously concerned with vision.

In testing cosmetic preparations for potential eye irritation nine albino rabbits are used. One-tenth milliliter (cc) of the test substance is instilled in the conjunctival sac of one eye, with the other eye serving as the control. In the case of the first three subjects the treated eye remains unwashed. Since washing the eye may or may not alleviate symptoms of injury, the six remaining subjects are divided into two equal groups. In the first of these groups eyes instilled with

Figure 2

Picture made 3 days after instillation of 0.1 cc of a ten per cent water solution of a common household soap. Cornea and iris normal, slight congestion of blood vessels of conjunctivae. (This is considered an insignificant reaction).

*Delivered before Scientific Section, Toilet Goods Association, May 13, 1952.

Figure 3

Picture taken 3 days after instillation of 0.1 cc of a Bubble Bath preparation consisting of 96% nonionic surface active agent. Illustrates an acute severe reaction—almost complete opacity of entire cornea, severe iritis, severe chemosis and redness of conjunctivae, moderate purulent discharge.

the test substance are washed with 20 ml. of luke warm water (approximately at body temperature) 2 seconds after treatment and in the second group the treated eyes are washed 4 seconds after instillation. The washing procedures are regarded as significant since it is important to know the effect of such a procedure, that is, whether it is detrimental or beneficial, and if beneficial to ascertain the extent of the benefit.

Ocular reactions are read with a hand slit lamp with readings made at 24, 48, 72 hours, and at 4 and 7 days after treatment or as long as residual injury persists.

Figure 4

Picture taken 105 days after instillation of 0.1 cc of a shampoo preparation containing 18% nonionic agent with 2% of a cationic agent. Illustrates permanent or semi permanent eye injury, connective tissue scarring of cornea, with invasion of the cornea by blood vessels—the aftermath of severe pannus, and a chronic conjunctivitis.

A preparation which has elicited corneal and iris lesions which have not cleared by the seventh day reading is considered a severe eye irritant. The cornea is scored on the basis of density of opacity and its total area involved. The iris is scored on the intensity or degree of inflammation exhibited, and the palpebral and bulbar mucosa are scored on the extent of chemosis, redness and discharge.

TABLE I

Scale For Scoring Ocular Lesions[1]

I. Cornea

A. Opacity-Degree of Density (area which is most dense is taken for reading)

Scattered or diffuse area-details of iris clearly visible..... 1

Easily discernible translucent areas, details of iris slightly obscured..... 2

Opalescent areas, no details of iris visible, size of pupil barely discernible..... 3

Opaque, iris invisible..... 4

B. Area of Cornea Involved

One quarter (or less) but not zero..... 1

Greater than one quarter—less than one half 2

Greater than one half—less than three quarters..... 3

Greater than three quarters up to whole area 4

A x B x 5 Total Maximum = 80

II. Iris

A. Values

Folds, above normal, congestion, swelling, circumcorneal injection (any or all of these or combination of any thereof), iris still reacting to light (sluggish reaction is positive)..... 1

No reaction to light, hemorrhage, gross destruction (any of these or all of these)..... 2

A x 5 Total Possible maximum = 10

(*Continued on page 118*)

Figure 4a.

Picture taken 8 days after instillation of 0.1 cc of a shampoo preparation containing 23% nonionic and 0.2% cationic surface active agent. Illustrates with the preceding slide the serious additive effects obtained by combination of agents. This slide is an example of severe early pannus, plus other reactions such as moderate opacity of cornea, severe iritis, moderate chemosis and redness of conjunctivae with moderate discharge.

Figure 4b.

Picture taken 15 days after instillation of 0.1 cc of a dandruff treatment shampoo containing 2% cationic surface active agent. Illustrates a severe phylctenar reaction in the cornea, plus a slight diffuse corneal opacity, slight iritis and slight redness of conjunctivae with slight discharge.

Preservatives in Cosmetic Preparations

by Harry Hilfer

Cosmetic preparations containing large quantities of organic materials in an aqueous medium are sometimes ideal vehicles for promotion of mold, fungus and bacterial growths. These same sets of conditions plus the fact that most of these preparations are not sealed against air are capable of setting up a pro-oxidizing chain reaction which eventually would cause a rancid odor or a discoloration in the product. Fortunately there are a large number of agencies on the market which are capable of counteracting both these tendencies. The chemist's chance is dependent however on the conditions which he must face. No all-purpose cure can therefore be recommended, but rather a listing of effective materials and how they do their work.

As indicated above there is really a two-fold problem involved in this discussion—bacterial control and effective anti-oxidation. The bacterial problem is the more complicated because of the number of different types of organisms involved. In addition the presence of large amounts of surface active agencies such as are present in a shampoo could greatly interfere with bacteriostatic agencies that are otherwise effective. Bacterial preservatives are not necessarily antiseptics, since by definition, an antiseptic will stop further growth of a colony of any organisms while the function of a preservative is to retard but not necessarily stop such growth. In most cases—where no antiseptic claims are being made a retarding agency or preservative is sufficient. A germicide is an agency which will kill bacteria not merely stopping its further development. However, the F. D. A. has currently taken the position that as far as cosmetic preparations are concerned, an antiseptic claim is virtually a germicidal claim. A germicide or antiseptic could therefore be regarded as a preservative but a preservative does not necessarily fit into the germicidal or antiseptic categories. These definitions are included so that we may stress the fact that we are discussing preservatives only.

In the development of preservatives for cosmetic use, perhaps the first agency employed was ethyl alcohol. Indeed when present in greater than 10 per cent concentration alcohol performs this function in a highly desirable manner and is still employed for this purpose in preparations where its use is indicated—such as in some hand lotions and in toilet waters and perfumes. Propylene glycol has also been found to exhibit marked

preservative effects but also in relatively large concentrations. Its use in a vanishing cream or hand cream would therefore be indicated, though in most cases other agencies are used as well.

Practically all cosmetic preparations containing water may be subject to bacterial degradation and since the substantially anhydrous preparations such as lipstick and face powders may be subjected to moist or humid conditions, preservatives are also added to these preparations. In the general consideration of the conditions under which they work most effectively, the primary stipulation must be that they be soluble in water to an extent commensurate with their effective concentration, since it is only through an aqueous vehicle that the organisms could be reached. For incorporation in lipsticks an oil soluble agency is most desirable but it should be sufficiently soluble in water to achieve its ultimate function.

It is easily seen that certain constituents are more easily prone to mold and bacterial growth than others and among the best of the promotions are the natural gums. Quince seed mucilages tragacanth and acacia must bear close watching and preparations containing them should be more strongly fortified than is otherwise necessary. All fatty acids are subject to possible attack but not to the same extent as is beeswax and other esters. To be perfectly safe all creams should contain a preservative.

Perhaps the most commonly used of the synthetic preservatives is the methyl para hydroxy benzoate. Its use is recommended in all hand creams and lotions in concentrations of about 0.15 per cent. This substance is actually more soluble in alkaline media than in acidic since the phenolic grouping is somewhat reactive with alkali and therefore soluble to a greater extent in water. Since most of the creams on the market utilize a soap emulsifier sufficient solubility of the agency is automatically assured. The propyl and butyl esters are also recommended since their phenol coefficients are higher than is the methyl esters, but this solubility decreases below the point where they are effective. The presence of solvents such as alcohol, glycerol or propylene glycol however changes the solubility factors and may enhance their activity due to greater solubility. In creams of higher lipoid content a common practice is to use a mixture of a propyl and methyl ester one dissolved in the lipoid phase and the other in the aqueous phase.

The advent of the soapless shampoos have confronted the chemist with further problems in bacterial growth retardation. The usual para hydroxybenzoates seem to be inactivated in systems containing large concentrations of these substances and stronger agencies must necessarily be used. In my own experience I have found that a small amount of formaldehyde is effective in such systems, the recommended concentrations being between 0.04 per cent and 0.08 per cent. In this concentration the odor of the formaldehyde is not readily apparent. Other recommended agencies are certain of the organic mercurials and p-chloro m-cresol but in all cases these should be used with caution because of differences in laws in different states governing their usage and possible irritation they may cause.

Other agencies which are recommended are substances such as hexachlorophene in alkaline media or alcoholic media or alcoholic media and quaternary ammonium compounds in systems which do not contain any incompatible substances.

Rancidity due to oxidation is not as much of a problem as is bacterial degradation, because the cosmetic industry does not use materials subject to rancidity to too great an extent. Where these materials are used, however, the problem is ever present and difficult to control. The literature offers several different mechanics of oxidative rancidity, but for the sake of brevity it may be explained by using the ethylenic bond as the focal point. Peroxides are formed at this point which finally are oxidized to aldehydes which are responsible for the odor. As stated above theories as to the mechanisms of the reaction differ, but for all practical purposes any substance containing a double bond should be suspect. A single double bond is not as susceptible to the oxidative process as is an oil containing two double bonds, but the presence of a di-ethylenic compound even in small amounts is sufficient to start the typical chain reaction in a substantially mono ethylenic mixture. Almost all our fixed oils—such as olive, cottonseed and corn oils are therefore subject to this reaction as are their fatty acids since they contain mixtures of both the mono and diethylenic compounds.

Most vegetable fats have incorporated in them natural anti-oxidants which may arrest development of rancidity by their presence. Most notable of these are the tocopherols whose activity is enhanced by the addition of citric acid or phosphoric acid—whose function is believed to remove metallic pro-oxidants from the reaction. The tocopherols are largely inactivated or removed by refining but the refined oils may be reinforced with these substances. Animal fats do

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FREDERIC LEWIS PHOTO

How Doctors and Detailmen Can Be Better Friends

by Allen Klein

PRESIDENT OF THE MEDICAL ADVERTISING SERVICE

From what I see and hear the task of the detail man is getting tougher and tougher. Just the other day I read in one of our trade journals where the number of detail men is increasing to a point where many physicians, instead of merely resenting the visitors, are actively hating them. A major complaint is that they simply do not have the time to see all the representatives. The result is a constant and quiet (more or less) hassle between doctors and detail men—the medicos trying to keep the boys out of their offices, and the men trying every which-way to get in. And when they do finally make it to desk-side, there is another tussle—the M.D. endeavoring to get rid of the visitor as soon as possible, and the visitor making every effort to ride out at least five to ten minutes. In this "doctor vs. detail man" deal the smaller houses in particular get the short end of the stick.

What to do, what to do? The other day the bright bulb lit up over my head as it does in the comics when one of the characters gets a bright idea. I remembered long ago when visiting certain factories there would be a sign in the waiting room—"The buyer will see salesmen Tuesdays and Thursdays only between 2 P.M. and 4 P.M." Why, I reasoned, couldn't the doctor do something like that?

And why not indeed? Instead of the continuous tug-of-war between the medical men and the detail men why couldn't the latter see the former at certain fixed hours? This would naturally be at the doctor's most convenient time, and preferably during non-visiting hours.

Thus, Doctor Smith could give two or three special hours a week to seeing and hearing representatives of pharmaceutical houses. Let us assume each man averaged eight minutes for his detail, the doctor could see, in three hours, about twenty-two men. This would be far more than he would ordinarily see in a week. In one session he would get over the ordeal—and would no doubt find it an ordeal no longer. With one sweep he would keep abreast and pay more attention to the news concerning the pharmaceutical products. The office routine of the physician, his nurse, and his patients will run more smoothly—untroubled by waiting D.M.'s. In one shuffle he would be a courteous gentleman, mindful of the fact that the detail man is only a human being trying to make a living. The tension and harrassment on the part of both doctor and detail man would, for the most part, be eliminated. There would be, in general, an atmosphere for the better.

Yes, that's fine you say, but if Doctor Smith is going to see detail men on Thursday from 3 P.M. to 5 P.M. and on Monday from 3 to 4, how is this going to work out with Doctor Jones and Doctor Brown and Doctor McGurk in that territory? Not so tough? Let Dr. Jones have a different set of detail men hours, Dr. Brown another, and Dr. McGurk still another. In this way, the detail men will see most physicians they want to see, in rotation. As doctors are amenable to such a plan the detail men can write down detail visiting hours and work out his route to cover the physicians as thoroughly as possible in as short a time as possible. The doctor on his part could have his office nurse distribute numbered tickets as each man comes in so there would be no dispute as to sequence. Or, if he has no office attendant he could have a stack of numbered cards on a table for the men to take as they come in. Perhaps the headquarters of the local medical society could have available to D.M.'s the hours which each physician is devoting to seeing detail men.

What a lot of high blood pressure could be headed off by such a system of planned visiting hours for detail men! Naturally there would be lots of rough and fine points to be cleared up, and the cooperation of the profession is to be obtained before the plan could be set in motion, but it's an idea and worth trying.

Another tangent on more doctors seeing more detail men would be for local and county medical societies to invite a dozen or so detail men to their meetings and give each of them ten minutes to present his detail. But therein lies another tale which I will leave to someone else to spin.

by I. R Hollenburg
PRESIDENT, VAN DYK & COMPANY, INC.

Surface Active Materials in Cosmetics*

Any discussion of surface active materials is usually preceded by an attempt at defining them. Unfortunately, by their very nature, this heterogeneous group must, of necessity, be first defined in terms of its behavior. We will, therefore, at the risk of extreme oversimplification, define surface active agents as those substances which lower surface or interfacial tension. They may function as emulsifiers, detergents, foaming, wetting, or spreading agents, or a combination of any of these. This paper will limit itself to the so-called "synthetic" surface active compounds as differentiated from those we consider "natural" products, such as soap, gums, lanolin, etc.

The group of commercial synthetic materials alone is of staggering proportions, consisting of over 1000 trade-named materials of varying chemical composition. Attempts at classification into main groups based on chemical structure have not been very successful. There has arisen a more common tendency to classify them according to ionization characteristics. Thus we have become accustomed to refer to a particular detergent or emulsifier as being anionic, nonionic, or cationic, the assumption being that products in each of these categories have a good deal in common. This is a false assumption and can lead to a good deal of confusion. The accompanying chart in Figure I will illustrate this point. It will be noted that outside of their ionization characteristics, the products cited have little in common either structurally or functionally. It is consequently faulty reasoning, for example, to assume that if a particular nonionic material was found to be unsuitable, either functionally or physiologically, in a given application, all nonionics are therefore to be considered

* Delivered before Scientific Section, Toilet Goods Association, May 13, 1952.

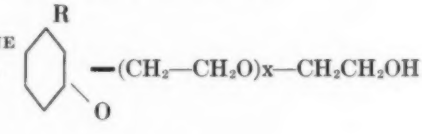
NONIONIC

POLYHYDRIC ALCOHOL FATTY ACID ESTERS

$$R{-}COOCH_2{-}\underset{\displaystyle CH_3}{\underset{|}{CH}}{-}O{-}CH_2O\,(CH_2OCH_2)xCH_2OH$$

AMIDES—$R{-}COOCH_2CH_2{-}N\,(C_2H_5)_2$

POLYETHYLENE OXIDE ALKYL PHENOLS—



ANIONIC

FATTY ALCOHOL SULFATES—$C_{11}H_{23}CH_2OSO_3Na$

ALKYL ARYL SULFONATES—$R{-}AR{-}SO_3{-}Na$

AMIDES—$R{-}COOCH_2CH_2{-}N\,(C_2H_5)_2$

CATIONIC

QUATERNARIES —

AMIDES—$R{-}COOCH_2CH_2{-}N\,(C_2H_5)_2{-}HCl$

FIGURE I

The three non-ionic materials cited above are of totally different chemical composition and their functional characteristics differ almost as widely. On the other hand, the amide given as an example in each group is identical, consisting of a condensation derivative of a fatty acid and diethanolamine. By varying the proportions of the raw materials and the reaction conditions, either a non-ionic or anionic material is obtained. The latter product becomes cationic in the presence of an inorganic acid such as HCl.

objectionable. Yet this specious reasoning was prevalent within and without the industry just a few months ago.

The cosmetic chemist has drawn freely upon this storehouse as a raw material source. In fact, it would not be an exaggeration to say that most of the outstanding products developed in the cosmetic industry in the past decade are based on the use of synthetic surface active materials. So much so, that it has become almost an automatic reaction for the cosmetic technician to turn to these materials when called upon either to improve an existing preparation or to develop a new one. This conditioned reflex is readily understandable, and at this late stage there is no need to go into a detailed listing of the many outstanding contributions made by synthetic surface active materials to present-day formulation of toilet preparations and related products. This tendency of the formulator to use a synthetic material merely because it is a comparatively new development does not necessarily mean that his finished product will be an improvement over existing preparations. In some instances, the very properties that make a surface active agent suitable for incorporation in one type of product will make it undesirable for use in another. Then again, we may have a product that is over-efficient, giving greater activity to the finished preparation than is normally considered desirable. A third situation frequently encountered is that in which a material is selected for its one outstanding property and later proves unsuitable, due to its lesser-known secondary characteristics. Unfortunately, limiting factors such as these are not always apparent in the laboratory, and do not become evident until the finished preparation is put to actual use.

It is apparent then, that an understanding of the limitations of synthetic surface active materials is as important to the formulator as is a knowledge of the advantages to be derived from their use.

A more detailed study of some of the limiting factors noted should be of some value in dealing with the problem. We will, therefore, consider a number of typical preparations in which difficulties of this nature have frequently occurred, and are apt to be encountered again.

Shampoos

The function of a shampoo is to cleanse the hair, removing dirt or other foreign matter and residual sebaceous excretions. A shampoo is therefore primarily a detergent solution. The detersive effect, however, is a rather complex phenomenon that is not yet completely understood, but which involves, in the main, a wetting out and emulsifying action. Soap is often cited as the classic example of a good detergent. Products formulated exclusively with soap are quite effective in soft water regions; but synthetic detergents have the edge when used with hard water. For this reason, although many excellent time-tested shampoos have been formulated with soap alone, others containing synthetics have gained a permanent place on the American market.

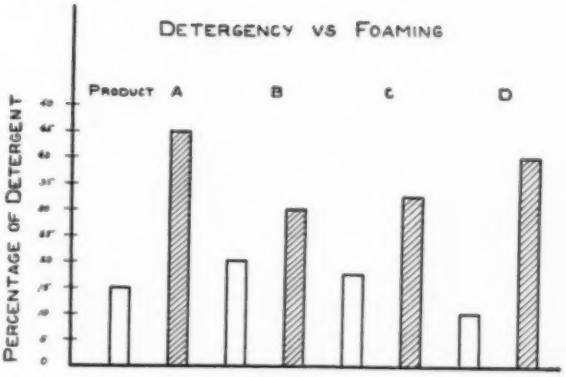


Figure II

It has been noted that a single surface active agent may have detergent, wetting, emulsifying, foaming and spreading properties, all to varying degrees. However, it does not necessarily always hold true that these properties are interdependent. For example, a substance may possess excellent detergent properties but yield relatively little foam or lather. Indeed there are a number of well-known products, such as the sulfated amides or quaternaries, which fit this description. In the minds of the vast majority of consumers, however, lathering power and cleansing efficiency go hand in hand. If a cleanser does not foam, it is thought that it will not clean and all attempts to educate the public to the contrary have failed. With this in mind, the shampoo formulator realizes that, in addition to the properties previously noted, the finished product must produce abundant instant lather under all circumstances of normal usage.

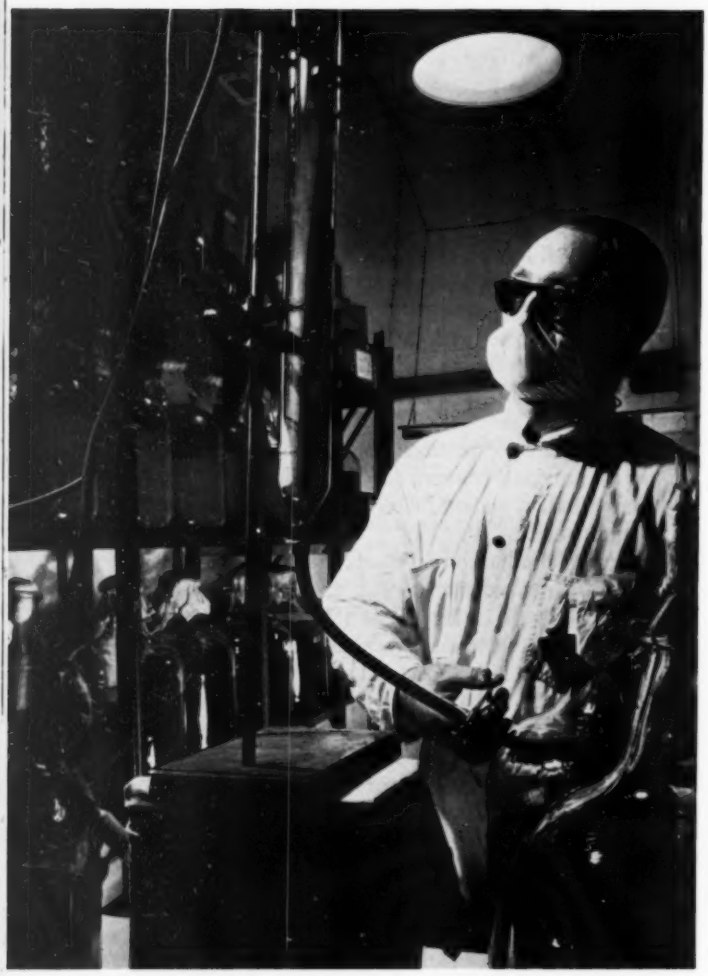
In order to produce an adequate amount of lather, it is frequently necessary to use an excessive amount of detergent. Figure II illustrates this point. The unshaded lines represent the percentage of detergent required to produce the desired cleansing effect, while the shaded lines indicate the amount necessary to afford sufficient lather. The presence of an excessive amount of detergent required solely for its foaming properties often leads to the hair being subjected to over-efficient cleansing. By this we mean that all fatty substances are removed from hair and it is rendered quite unmanageable and difficult to comb or arrange.

There are several methods of overcoming the excessive defatting action described. One is to subject the hair to treatment by the application of oily substances which will in effect replace the natural fats normally present on the hair; or, as an alternative, a preparation containing various cationic substances may be employed. The latter are similar in composition and action to those used for many years in the textile industry in improving the "handle" of wool and other fibres. These methods have been proven quite successful when applied in beauty shops by professional operators, but are rather time consuming for home use. It has therefore become a widespread practice to incorporate so-called "conditioning" agents in the shampoo formula.

(Continued on page 121)

by William Bickers, M.D.
RICHMOND, VIRGINIA

Clinical Research and th



E. R. SQUIBB & SONS

Many points of common interest bind the physician and drug manufacturer. Their ultimate responsibility is the same—the life, health, and happiness of the patient. The physician must depend upon the manufacturer of his drugs for the purity their components and the standardization of their potency. The compounding of prescriptions by the physician is almost unknown in these modern days and it will not be too long before this function will be lost to the corner druggist. Today the average pharmacist fills 80 per cent of his prescriptions from drugs compounded and, in many cases, packaged by the manufacturer. This trend will continue because the manufacturer is equipped with laboratories for assay and analysis, and facilities for preparation and marketing that cannot possibly be approached by the local pharmacist.

In recent years the manufacturer has assumed a new role, namely, that of research chemist and pharmacologist. Whereas, until recently our medical schools were the only source of new drugs and compounds, it is now an amazing fact that the focal point of medical research has shifted to the laboratories of the pharmaceutical houses. They are interdependent.

The sulfa drugs came to us through the tireless, monotonous, step by step inductive research plan of the laboratory scientist. Mice inoculated with a standard dose of virulent bacteria were given one after another of a series of drugs. Records were kept. Years of investigation finally revealed that the survival rate of mice receiving sulfanilamide was somewhat higher than that of groups receiving other medication. Further exploration revealed the almost specific action of this compound and its relatives upon the gram positive cocci.

Penicillin was the discovery of a laboratory physician, Dr. Fleming, whose bacterial culture plates became contaminated with the mold of penicillium notatum. He observed the clear, translucent area about the growing mold where the bacteria on the plate were destroyed by the excretory product of the growing penicillin. This was a chance observation, say some—pure luck, say others—more like it, as Pasteur was wont to say: "A great discovery—the good luck of the prepared mind."

The discovery of insulin by Banting & Best and the

* Delivered before the Proprietary Association, May 22, 1952

nd the Manufacturer*

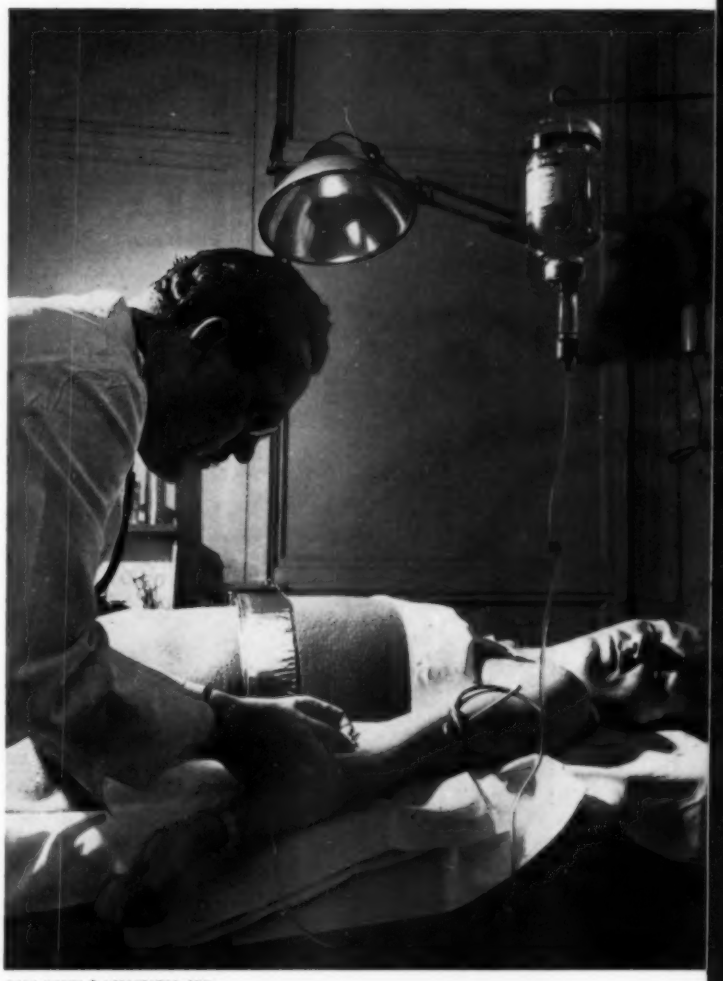
efficient marketing of it has brought life to countless thousands. The liver fraction for pernicious anemia and the endless quest of the pharmaceutical laboratory for the specific factor contained therein finally culminated in folic acid and vitamin B_{12}. This is a saga of pharmaceutical research.

In the nature of things no other private enterprise should be so concerned with its social responsibility as that engaged in the making and distributing of pharmaceuticals. This sense of responsibility is born neither of pure altruism nor of pure profit-making. The two are interdependent and inseparable. Most of the new drugs which are used today are specific in their effects, powerful in their action, and potentially dangerous if not made according to the highest standards of purity and control. Drugs like streptomycin, heparin, cortisone, ACTH, can as easily terminate the patient's life as his disease.

A prerequisite to staying in the pharmaceutical business today is medical and clinical research. It is no longer a question of good business but a major condition for existence in business at all. About fifty per cent of drug sales today are products that did not even exist ten years ago. Ninety per cent of prescriptions written by doctors today could not have been filled fifteen years ago. It has reached the point where the research departments of most of the pharmaceutical houses spend the major part of their time trying to make their own products obsolete, knowing that their competitors have the same objective.

Although the pharmaceutical house exists primarily to serve the needs of doctors in the treatment of their patients, it is now acknowledged that some drugs must, by their very nature and the use to which they are put, be available to the patient without the intermediary of the doctor's prescription. One has but to think of aspirin in this connection. However, upon the manufacturer who prepares and sells drugs directly to the patient there rests the tremendous responsibility of safeguarding the patient. Furthermore, if he wishes to stay in business in this changing world, he must, through research, constantly improve his products or discover new ones. There is nothing static in the pharmaceutical business today. Either you must move toward the light or wither in darkness. Medicine as a

(Continued on page 125)



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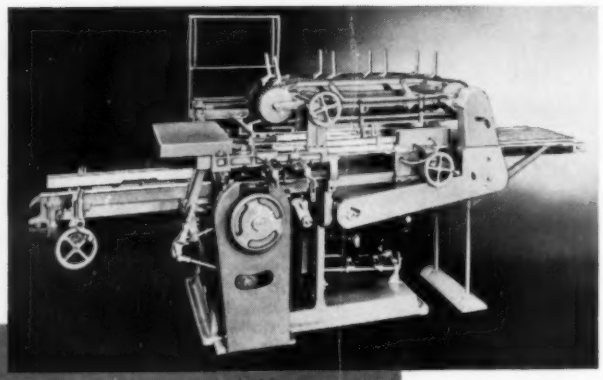

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The FA can be adapted to virtually any type of wrapping material. This enables you to design an ideal package—both from the standpoint of protection and eye appeal. The wrapping material may be in roll form or, in the sheet-feed model, cut-to-size sheets. When *printed* roll material is used, the machine registers the wrapper accurately on the package by electric eye. Can be equipped to apply end labels and top labels. An easy-opening tape may be incorporated in the wrapper, if desired.

WIDE SIZE RANGE

One FA machine will accommodate a wide range of sizes—some users wrap over a dozen sizes. This, combined with its speed of 100 packages a minute, means utmost production from a single machine.

Packages may be fed automatically from cartoning machines. Speed can be adjusted by hand-wheel while machine is in operation. Changes from one package size to another are quickly made by simple hand-wheel adjustments and the substitution of a few parts. Automatic stops prevent feeding of wrapping material when no package is in place or if a jam occurs.

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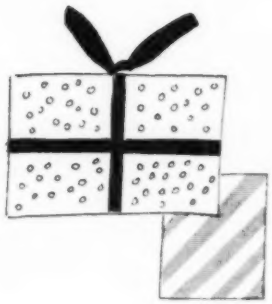


Packaging and Selling

Finesse

Jules Montenier, Inc. will have a companion product to Stopette which is supposed to arrive on the market in July. This product is Finesse flowing cream shampoo packed in a Plax bottle that can be pumped by hand.

New Advertiser

The J. R. Watkins Co. of Winona, Minnesota is an 84 year old company which has long been prominent in our industry. While their primary business has been in such things as foods and notions, etc. the Watkins wagon man, who covers a good part of the United States, has for many years carried a large selection of cosmetics, fragrances and other household products produced by this trade.

Now for the first time in 84 years this company is launching a national advertising campaign which will appear in full page and in color pages in Look, McCalls, the Saturday Evening Post and twelve farm papers. The purpose of this advertising is to pave the way for the Watkins wagon man on his house calls and to help that most critical problem of all house-to-house companies, that is, the attraction of good personnel for sales agents.

Retailer's Turn

In moving against Kroger Co. in Cincinnati and Safeway Stores in Oakland, California the Federal Trade Commission is firing both barrels against the buyer.

This is not the first time that the Robinson-Patman Act has been directed against a retail buyer but it looks as if for the first time the responsibility of the retailer in the violation of this act is going to be moving up somewhere near equality with the manufacturer and the seller.

Where the retailer comes in is contained in the clause "Knowingly to induce or receive a prohibited discrimination in price." According to reports from sales managers returning from trips and from territory salesmen a vast majority of the retailers in this trade, and this includes executives in many department stores, are completely unfamiliar with this clause in the Robinson-Patman Act and have no awareness at all of any degree of responsibility on their part so far as this act is concerned. These sales representatives also tell us that in most cases where retail executives do know they can be liable for a violation of this Act they shrug it off casually with the assumption that all this kind of stuff is the hard luck and responsibility of the manufacturer or the resource.

At the annual convention of the National Association of Purchasing Agents it was noted that the purchase of industrial materials are not immune to the applications of this law. Up until now the Federal Trade Commission has not directed its attention to the terms and conditions of sales for raw material, packages or equipment entering into production or processing but that this does not mean that the law has no application here.

Problems of Multiple Brand Selection

"It's time to stop selling" according to J. Sidney Johnson who is Director of Trade Relations for the National Biscuit Company. What Mr. Johnson meant by this provocative statement is that it is time to stop selling in the old-fashioned way, by which he meant loading the stuff on the retailer, and getting down to brass tacks in helping the retailer to sell to the customer. In this increasing period of selfservice in retail stores Mr. Johnson thinks that salesmen are generally failing to measure up to today's requirements and that most manufacturers have failed to keep pace with a revolution in food merchandising. Mr. Johnson thinks that salesmen today should know more than any individual store operator does about layout, stock arrangement, display and other operational factors that produce greater sales and higher profits. It means he said that manufacturers' representatives should not be salesmen at all but should be distribution experts. "There is tremendous competition within stores today for space and position, because over 60 per cent of buying decisions are made on impulse. Packages must be designed to sell themselves and advertising must presell the housewife. Increasing the amount of ads will not by itself boost sales, however, because consumer selection has replaced consumer demand. Few items are so well entrenched that the customer will settle for nothing else. Rather we now have multiple brand selection."

Average Chain Sales

On the basis of average sales per outlet the chain drug stores are outselling food chains and variety stores in three product classifications. This survey was made on a national basis averaging up all the individual stores of each classification. Any one of these stores in any territory may surpass or drop below this average record.

For the period of January and February 1952 the average chain drug outlet sold $523 of dentifrices as compared to the average chain food single store volume of $213. The average variety store sale was $133 per unit.

In shampoos the individual store of drug chains averaged $332 compared to $118 for the food store, and $58 for the variety store. In hand preparations for these two months the average single store of drug chains sold $316 compared to $66 for the food store and $70 for the variety store.

This information is part of the study being made by Industrial Surveys Company, Inc.

Growing Macy

The new Macy suburban store in the new Hillsdale shopping center on the San Francisco peninsula adds another unit to the expanding R. H. Macy & Co., Inc. retail empire. Macy now has six metropolitan and fourteen suburban stores, not including the new Hillsdale store to be constructed.

Looking at the Pharmacist

"The pharmacist and the Personal Equation" is a new staff presentation just issued by Batten, Barton, Durstine & Osborn, Inc. This is a panel study of consumer opinion of the pharmacist and his professional attitude and his operations as a pharmacist.

Perfection in Labor Relations

The Upjohn Co. has a new employment policy in the manufacture of cortisone. The new employees to come under this policy are very humble, hardworking individuals who nevertheless, according to reports, are capable of performing miracles. These employees are not in the slightest bit interested in forming a union; we're quite sure they never heard of over-time, seniority or grievances. In fact, they are not interested in anything except regular meals and a decent congenial place in which to work, which means very little more than sanitation from their viewpoint and the right kind of temperature.

In addition to being very hardworking with a willingness to keep at it all the time these new employees are a very smart bunch. They never went to college, although a few may have casually drifted through the buildings, but they certainly have had no such thing as a chemical degree. Nevertheless they are capable of making complete monkeys out of some of our best chemists and chemical engineers and are able to produce a result, by side-stepping all sorts of time consuming and complicated processes that the chemist and the chemical engineer, in his present state of technical achievement, is compelled to use.

These new employees are among the lowest form of life that we know. This one, in fact, is one of the very common bread moulds.

It looks to us as if one of the most brilliant fields open to human research is to discover and make pets out of a lot more of these uneducated, hardworking little buggers and let them do a great deal more of the hard and complicated jobs in the drug and chemical industry.

New Inecto Package

Sales Affiliates, Inc. of New York has come up with an interesting application of the Plax Corporations squeezable plastic bottle. The product is Inecto Hair Coloring and the package provides a new way to mix and apply the hair coloring at home. The package consists of two bottles, one for coloring and the other a developer. The mixed product is applied directly from a sponge fixed in the cap of the container.

Grocery Store Rules

Here are the qualifications which a non-food product should have to justify a place in a grocery store, according to Paul S. Willis, President, Grocery Manufacturers of America, Inc.

The product should be comparatively low in price, widely used, a homemaking product that satisfies a need of the homemaker and that is rapidly consumed or used up.

Prestige of Pharmacy

The pharmacist who emphasizes his profession as well as his merchandising skill in the operation of the drug store today is more likely to succeed than the druggist who emphasizes merchandising skill exclusively. This is the advice of Dr. J. Mark Hiebert, Executive Vice President of Sterling Drug, Inc. in a speech at the Commencement Exercises in the New England College of Pharmacy. According to Dr. Hiebert, "A pharmacist who throws away his professional education and training is forfeiting a most valuable competitive asset in this era of giant retailers and giant retailing. The public will always hold pharmacy in high esteem because it is a profession which serves the health and well-being of our people."

There seems to be a growing trend in the retail branch of the drug industry to practice just exactly what Dr. Hiebert is preaching. This is apparent in the new emphasis which some of the chains are placing on their subscription business. It would certainly seem that the druggist who tries to imitate the supermarket is up against very heavy odds in retail arithmetic, as regards traffic, turnover and cost of operations. It would certainly seem that the best advice that can be given to the retail druggist today is to turn as sharply as possible in the opposite direction to the giant retailer, the grocery store or the supermarket, and to put his confidence in a clientele who will respect his professional standing in the community.

Elements of Packaging

In introducing the new contour line of stock mold bottles for cosmetics, the Owens-Illinois Glass Co. outlines the features which are so essential today not only in a glass container but in any kind of a container. Outside of a pleasing appearance, which consists of graceful lines and pleasing contours and classical styling, the qualities are:

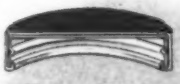
(1) Good stability.
(2) Large label space.
(3) Practical for packing line operations.
(4) Designed for lightest, practical weight.
(5) Graceful shoulders for greater strength.
(6) Popular hand grip feature.

"No wonder my cream keeps so *Soft* and *Fresh!*"

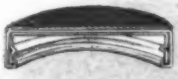
Yes, it's MeritSEAL'd
...and that means
POSITIVE PROTECTION,
Miss!

The women who buy products capped with MeritSEAL love it—for its smooth, trim lines . . . smart, glistening colors . . . and its distinctive look and feel of luxury. MeritSEAL's safe, efficient seal keeps their cosmetics fresh and moist as new. Everyone who knows MeritSEAL agrees. Cosmetic manufacturers know how it compliments and enhances their product. Production men know it can be depended on for trouble-free performance on the production line. Behind-the-counter saleswomen praise the eye-catching displays—and the fast sales—they can make with products using MeritSEAL. See for yourself how really attractive and efficient MeritSEAL is. We'll be glad to send full information and samples. Simply state your color preference and sizes needed for your product.

HARD, SCRATCH-RESISTANT COATINGS. Bright, sparkling colors for instant sales appeal. Handsomely lacquered or lithographed to suit your requirements.



PATENTED THREAD DESIGN. Spins on freely. Forms a perfect-fitting seal, but won't "freeze" to container. Only MeritSEAL has this exclusive design.



SIMPLE, EFFICIENT CONSTRUCTION. Liner and thread are inserted into a sheet metal shell. The thread holds the liner in position, and the lower edge of the shell locks the thread in place.

RANGE OF SIZE, CHOICE OF COLORS AND LINER MATERIALS. 12 standard sizes ranging from 48 mm. to 100 mm. Special sizes can be ordered. Choice of various liners to suit your needs.

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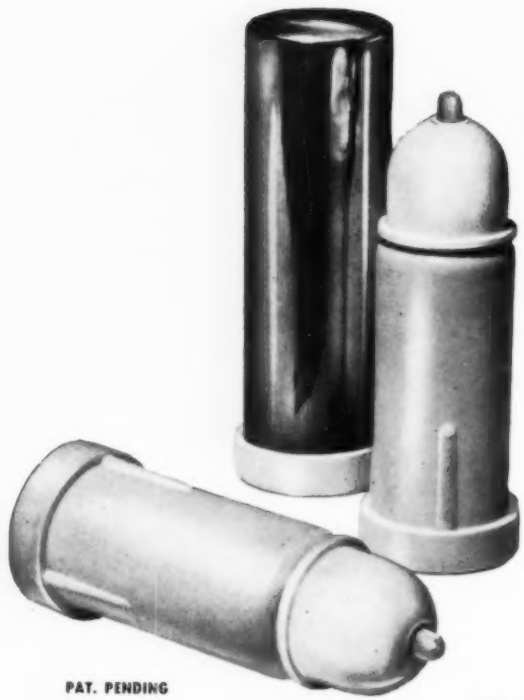
RICHFORD SPILLPROOF PERFUME FLACONS

The magic, purse-sized perfume flacon still making sales history is now joined by a new Richford Creation, also destined for fame.



PAT. PENDING

RICHFORD TOUCH-N-FLO*

PURSE DISPENSER

*TRADE MARK

The one perfect purse container for Lotions, Cream Sachets, Liquid Soaps, and Deodorants, etc.

TOUCH-N-FLO will not leak, yet the contents flow easily with a gentle touch to the skin. Unbreakable plastic bottle and sure-acting dispenser handsomely covered with a snug gold metal cap. Contents 10 cc.

Write for Samples and Prices.

THE RICHFORD CORPORATION
251 FOURTH AVENUE NEW YORK 10, N. Y.

A Store Wide Promotion

Just what it takes to conduct a store-wide promotion and to make this store-wide sales effort a complete package can be seen by taking the Coty Muguet des Bois promotion at the Gertz store in Jamaica as a case history example. This promotion broke on the 28th of April to coincide with the coming of Spring. Several weeks before the promotion a series of meetings with various groups of store executives and store departments was held to plan the complex details of the promotion.

Plans for employee participation on a store-wide basis were made and at a special breakfast for cosmetic sales people the entire program was discussed.

This promotion included the following:

The customer who won the letter contest describing why she liked Muguet was given a free trip to Nassau and the sales person who passed out the slip to the winning customer also received a prize. Muguet notes were placed in all pay envelopes; scented cards mailed to 30,000 club members; Coty bill insertions were used on a two-month basis; sprigs of Muguet or Lily of the Valley were handed to 1,300 customers in Jamaica and to 700 in Flushing on the opening day. In addition there were Muguet gifts to members of the customer advisory board and free sachets to all of the customers attending the store's fashion show. To further carry this theme throughout the store all fashion art work showed Muguet on the lapels and all mannequins throughout the store wore Muguet Sprigs.

At both the Gertz stores trellises were set up in the lobbies where special cards displayed the perfume with a sales girl spraying the air of the store with the scent. The entrance to the store's dining room was set up to resemble a French cafe. In both stores the windows were decorated with a Parisian background showing an artist studio with a live artist continually painting. Newspaper advertising was used with perfume color pages in the local newspaper.

This is just a bare outline of what it takes to sell perfume.

Busy Grocery Traffic

One of the biggest advantages of the grocery store over the drug store in the marketing of packaged goods is store traffic. Various estimates place the number of people who enter a grocery store during the week as from four to ten times or even more as many people as enter a drug store.

These figures may not be as conclusive as they seem to be. For instance, in the Consolidated Consumer Analysis, a research project of cooperating newspapers in fifteen major markets, we discover that well over 80 per cent of the people visit the grocery store on Friday and Saturday and that these two days are exactly equal in first choice of shoppers as the day to visit the store. As an example of the favorite shopping day, here is what happens on Monday through Thursday; in Milwaukee 14.8 per cent of the people prefer these days; in Indianapolis 11.1 per cent; St. Paul 11.3 per cent; Omaha 8.1 per cent; Salt Lake City 7.3 per cent; Modesto 12.9 per cent and Seattle 11.3 per cent.

This is an abnormally high concentration of traffic on weekends, which anyone who picks up the family grocery basket is acquainted. It means that any of the non-food manufacturers who enter grocery store distribution will certainly get the heavy store traffic, but that it will be largely squeezed into two very busy, hectic days where the problems of selecting the family food are the dominant occupations.

It would seem that the druggist in any community, where he is suffering severely from grocery store competition, could give some thoughtful consideration to what he might do to attract his normally stable clientele on Monday through Thursday.

More Prescriptions

In 1951 approximately 382,000,000 prescriptions were filled as compared to 200,000,000 in 1941. During this time the average price has gone up from approximately $1.00 in 1941 to $2.25 per prescription in 1951. These figures were given by the Ellis B. Meyers Read Drug and Chemical Co. at the Rutgers Pharmaceutical Conference.

Drug Store Items in Supermarkets

Speaking at the Rutgers Pharmaceutical Conference, Lyle Purcell gave the following figures on the so-called drug store products in supermarkets:

On a national basis at least 85 per cent of all supermarkets now handle cosmetics and health aids. It is estimated that almost half of the supermarkets plan to enlarge their drug and cosmetic department during this year. Of the 1,166 new supermarket stores built last year, 90 per cent of them installed a self-service cosmetic department.

About 38 per cent of the supermarkets still use rack jobbers who handle their complete toiletries operation while 61 per cent now do their own buying and run their own departments. Of this latter group about 60 per cent of them buy from their local wholesalers and about 16 per cent buy direct from manufacturers with the balance doing a little of both.

Business Census

The United States Department of Census has just issued as part of their trade series a compilation of the complete Census data on the retail and wholesale business of this trade. This bulletin is called the Drug Trade and is No. 3-6 of the Trade Series.

Sandalwood Gavel

At a recent meeting of the American Society of Perfumers, Frank Spitalari of Polak's Frutal Works presented the Society with a gavel and a stand. These two pieces, carved from sandalwood by his father, are beautiful examples of the woodworking art.

Another Sally for the Retailer

A new national drug advertising and sales promotion campaign is on the way to bolster up the competitive position of the 50,000 retail druggists. This promotion is following the outline first established by McKesson and Robbins, translating what is in effect local cooperative advertising into a national program of cooperative advertising.

This program was originated by George Gale of the St. Georges and Keyes, Inc., a New York advertising

NEW!
YOUR
SOLID COLOGNE
IN A
PROPEL-REPEL
CONTAINER*
cal umet
Swivelpak
Solid Cologne Dispenser
A genuine revelation in solid cologne packaging.
NO MUSS NO FUSS
• Exclusive Airtight Urea case.
• Purse size: capacity ½ oz.
ECONOMICAL
• No molding required.
• Material can be poured directly into container.
• Eliminates foil wrapping.
CALUMET Manufacturing Co., Inc.
565 Fifth Avenue, New York 17, N. Y.
MUrray Hill 8-4270
*PAT. PEND.

agency. The advertising is the shopping page style used normally by the food and drug chains and will feature 55 drug products in a two-page spread, appearing first, in September in the Saturday Evening Post, Ladies Home Journal, Holiday, and Country Gentlemen. The plan includes synchronized efforts by manufacturers, independent wholesalers, the retail druggist, aided by promotional efforts of the publisher, to tie-in this advertising with local store promotion and display at the time the advertising appears.

Up to date the retail druggist seems to be the primary and so far as we know the only retail group to be included in what is certainly a new expansion and enlargement of advertising and retail sales promotion. It seems to be a characteristic of these plans that one large national publisher such as Curtis or Crowell, with several different publications under one roof, or a publisher with an enormous distribution system such as the syndicates or monthly supplement in Sunday magazines join together with a national group of wholesalers, who in turn will attempt to coordinate and line up the retailers of a trade all over the country for a timed and integrated sales program. Of course, as for most cooperative advertising, it is the manufacturer who pays the bill. But in return he is given his allotted space of advertising in accepted advertising media and a promise, which should be fulfilled, for a greater degree of store cooperation and store display for a given period of time than he would normally receive.

It is perhaps highly significant that all of these stupendous selling programs, involving quite a few million dollars, and attempting to coordinate sales activity within a specified period for so many retail salesmen, wholesalers' salesmen, manufacturers' salesmen and publishers that this kind of promotion should all be directed so far to the retail druggist. There is almost a feeling of rallying around the fort for defense or an expenditionary force to the rescue. Nevertheless, with all this concerted clamor and sales activity it must certainly work out that the retail druggist would be silly not to participate and he can certainly sell quite a lot of extra merchandise and make more money if he joins in with this numerous and very local crowd.

The really interesting thing about this is that the advertising agencies and the big publishers are sure to acquire a ravenous appetite for the expansion of this idea of transferring local cooperative advertising with all its headaches, to the national media. The amount of space involved opens up fascinating vistas of tremendous scope to advertising men, even though it does involve a tremendous amount of extra work compared to handling the account of a single manufacturer.

The Rack Jobber

To the rack jobbers, or incidentally the point-of-purchase distributors, as they are starting to call themselves, undoubtedly belongs the chief credit for the rapid expansion of non-food items in grocery stores. The rack jobber has been through a tough but dynamic period of growth and it is said that today approximately 60 of these companies are now in business and are in a good firm position. They even have a trade association, called the Toiletries Merchandisers Association.

The functional value of the rack jobber has been so evident, even to the big chains, that the A & P are now doing business with these jobbers on a national basis, the first time this retail leader has ever played around with a concession.

The rack jobber has an appealing proposition to the grocer no matter whether it is a huge chain or an individual store. This jobber assumes all capital obligations and risks, delivers the merchandise, does all the unpacking, pricing and shelf arrangement and assumes all responsibilities for sales. If a product doesn't move, the rack jobber promptly takes it away and replaces it with something that will move. The grocer gets a profit of 25 per cent, which is several points above the average of his food business, with no responsibility or expense beyond making the space available for the rack. His employees do not have any responsibility at all.

The Chemist and the Adman

A leading advertising agency, Lennen & Mitchell, ran a full page advertisement for their own company in the New York Times recently and from what we gathered it stirred up quite a little comment. The point of this advertisement was that the advertising man and the scientist have been plotting together to create a great many of the modern miracles which make this such an exciting country and which make foreigners look at us with awe and sometimes consternation.

Almost every scientist, that is to say, in our trade, chemist, has had some experience with an advertising man and usually finished the meeting in a dither of futile rage. What the advertising man saw in the product and what the chemist saw were usually just about as far apart as science and imagination can possibly get. As a matter of fact it has often been remarked in laboratory circles that it is a wonder that the company kept a chemist on the payroll when they had such a hot rod advertising man to do all the thinking and inventing.

Nevertheless in this advertisement there is a sober and a very true statement of the facts of life as regards business today. It is all very well for chemists to come up with a new idea, a new product or some variation that adds a plus to what is already in existence. Once in a blue moon this new creation is so original and so good and so obviously needed by the public that nothing more is required than to let the news leak out to make this laboratory creation a known, accepted product of wide distribution. Usually, however, the invention of the scientist is something like the oil in the ground in Iran. When the advertising men and the salesmen contribute their particular talents this product enters the stream of commerce, becomes available everywhere, is introduced to the public and a desire for its possession is established. Without the advertising men and the salesmen this product even though it is good and new and could be wanted, could very easily remain in the laboratory in just about the same status that the wealth of oil is now reposing in the grounds of Iran.

MIDGETS SELL BIG!

Continental HALF-SIZE Aerosols get new customers for your liquid and foam products

You tap a whole new market when you offer your liquid or foam-type products in Continental's midget aerosol containers. You get the people who can't use the regular size, those who want to "sample it," and those more concerned with lower first cost than overall economy.

Continental's midget aerosol cans are miniature, half-size editions of their big 12-oz. brothers. They come in the same domed-top (1-inch curl opening) and concave styles. They take the same standard valves. And they perform just as beautifully.

For details and success stories *in your field,* just call the nearest Continental office.

Hold 6-oz. of average product

Domed-top or concave styles

Volume builders for makers of—

Shaving cream, shampoos, hair lacquers and other toiletries

Insecticides, moth proofing, room deodorants, artificial snow, etc.

Paints, lacquers, plastic sprays, oil or aqueous solutions

CONTINENTAL CAN COMPANY

CONTINENTAL CAN BUILDING. 100 East 42nd Street, New York 17, N. Y.

EASTERN DIVISION: 100 E. 42nd St., New York 17

CENTRAL DIVISION: 135 So. La Salle St., Chicago 3

PACIFIC DIVISION: Russ Building, San Francisco 4

Doin's ...

Lipette Co. is now offering a multi-purpose sampler, Lipettes, to manufacturers of lipstick and other cosmetics. The Lipettes are sturdy match-like sticks in a matchbook style package with cosmetic samples on the tip of each stick. Each package contains from three to fifteen cosmetic-tipped sticks. They are also used for perfume oil, rouge, eye shadow, and other cosmetics.

Pfizer is offering Bacitracin for parenteral use and sterile bacitracin powder for topical use, both dosage forms of the antibiotic being marketed in vials containing 50,000 units each.

Squibb has announced the preparation of Solacthyl Injection (Squibb Corticotropin) in a clear, stable, sterile solution that may be kept for a year without refrigeration. The solacthyl acts to stimulate the adrenal cortex to increase its production and secretion of Compound F and other steroid hormones.

Premo Pharmaceutical Laboratories have introduced Dermeze-Premo, a soothing, water-soluble cream containing Tyrothrycin, ethylaminobenzoate and thenylpyramine HCl, which will relieve the patient from the burning, itching and inflammation associated with many skin conditions. Also introduced was Premocones, rectal suppositories containing an antibiotic, anesthetic, and astringent.

Caryl Richards, Inc. has introduced its new Rocket Wave dh, a professional permanent that "protects as it waves." It is said that it will not dry hair and that it gives beautiful, longer lasting waves to hair that is naturally dry, or dry from sun, bleach, or dye.

Winthrop-Stearns has added vitamin B_{12} and folic acid to its muliple-vitamin preparations, Pluravit and Pluraxin. Both of these preparations also contain Vitamins A, B_1, B_2, B_6, calcium pantothenate, nictotinamide, ascorbic acid and vitamin D_2, Ergosterol is used in Pluraxin and Calciferol in Pluravit.

Winthrop has introduced Neocurtasal Iodized, an iodinated salt substitute for use in low-salt and sodium-free diets. It has been developed as a supplement to Neocurtasal, previously offered by the company. It is especially recommended when low-salt diets are prescribed for pregnant women.

Lederle has a new, dispersible form of aureomycin for use in the manufacture of milk replacements and additives for pigs and calves. Sold under the trade-mark Aurofac-D, it is guaranteed to contain at least five grams of aureomycin per pound and contains appreciable amounts of vitamin B_{12}. It is readily dispersible in milk and water.

Toni has developed New Bobbi, the first pin-curl permanent to eliminate the neutralization step. It has been distributed to the trade nationally and has been backed by an extensive merchandising and advertising campaign. Ads broke in newspapers in more than 90 major markets in late June.

Armour Laboratories have prepared a "child-proof" form of aspirin named Crystar. The powder is tasteless and can be added to any familiar liquid without objection. It is supplied in packets which contain one grain, 24 packets to a box. One packet will dissolve readily in as little as two teaspoonfuls of water, juice or milk.

The Arnar-Stone Laboratories (formerly Americaine, Inc.) have developed the Americaine Aerosol automatic spray dispenser for the application of a topical anesthetic. Each spray dispenser contains 4 ounces of Americaine Liquid and 7 ounces of inert propellent which evaporates as soon as released. The liquid contains 20 per cent dissolved benzocaine, plus a bacteriostatic agent, and oxyquinoline benzoate, to help guard against infection, in a water-soluble base.

Bristol Laboratories have released Bristamin Lotion, a new product for immediate symptomatic relief of puritus and dermatoses of allergic and non-allergic nature. The lotion offers a new antihistaminic, Bristamin dihydrogen citrate (an exclusive Bristol compound, Phenylyoloxamine Dihydrogen Citrate) in a soothing emollient base combining therapeutic efficacy with cosmetic acceptability.

Stanley Drug Products, Inc. has introduced Romaroid Crystalin Liniment, a companion item to Romaroid Tablets. It is an external product for the relief of muscular aches and pains. The company's regular Crystalin liniment will remain on the market in the larger $1.50 size, while the Romaroid Crystalin Liniment is selling at $1.

Shulton will bring out a new stick deodorant for its Old Spice For Men line late in July. It will retail for $1.

Smith, Kline & French Laboratories are introducing Dexamyl Elixir, an alternate dosage form of the Dexamyl Tablets, and contains ½ grain of amobarbital and 5 mg. of Dexedrine sulfate. It is indicated to relieve nervousness, irritability, anxiety, depression and inner tension.

Propylene Glycol

Can live with alcohol or leave it alone!

Whether the cosmetic lotion you prepare is non-alcoholic, mildly alcoholic or even strongly alcoholic, propylene glycol, U.S.P., will combine effectively and provide a soothing and softening effect without residual stickiness. Propylene Glycol is used as a carrier, humectant and preservative in many types of cosmetics—yielding a superior product while often replacing a more expensive ingredient. It may well do the same for you. Write for more complete information and facts from Dow, Dept. OC19.

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

SEND FOR A *free sample* OF

Propylene Glycol, U.S.P.

THE DOW CHEMICAL COMPANY
Department OC 19 • Midland, Michigan
Please send me a FREE experimental sample of Propylene Glycol, U.S.P.

NAME_____ TITLE_____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

DOW

CHEMICALS

INDISPENSABLE TO INDUSTRY AND AGRICULTURE

Doings (CONTINUED)

Prince Matchabelli's new Purse Duo supplies cologne-stick fragrance variety in a neat and compact simulated red-alligator snap-tight case for purse or beach bag convenience. It contains two popular cologne fragrances, Stradivari and Abano, each in solid, non-spillable form, each in a lipstick-size, capped, polished brass case.

Geigy Pharmaceuticals has prepared Butazolidin, a new, synthetic, orally effective agent for the treatment of arthritis and allied disorders. It has been released for general use on physicians' prescription and, according to authorities, is effective in many forms of rheumatic disorders.

Upjohn has released Cortisone Acetate in 25 mg. compressed tablets.

Winthrop-Stearns Inc. has introduced Neocurtasal Iodized, an iodinated salt substitute for use in low-salt and sodium-free diets. The glass dispenser has a polyethylene snap cap and a perforated disc of the same material which is removable for refill purposes. The amount of potassium iodide present equals that concentration in iodized table salt.

Schering is releasing Ditubin, its brand of Isoniazid, the new antitubrculosis compound. The 50-mg. scored tablets are packaged in bottles of 100 and 1,000.

Armour has announced a new highly purified formulation of Acthar, its brand of adrenocorticotrophic hormone, called HP Acthar Gel. It is said to be the first ACTH gel product for both subcutaneous and intramuscular administration. It is extremely low in solids and foreign protein and is stable at room temperature, requiring no refrigeration.

Schering has prepared Dormision Liquid which induces a calm, peaceful sleep without mental depression on awakening. It is recommended for children and adults with simple insomnia where pain or agitated psychotic states do not co-exist.

Johnson & Johnson will continue TV advertising through the summer by featuring four products on "Summertime U. S. A.," the summer edition of the Kate Smith television show. The show will advertise Band-Aid Plastic Strips, Band-Aid Plastic Patches and Spots, and Red Cross Adhesive Tape in the new "Cut-Quick" package.

Pitman-Moore Co. is distributing Novahistine, a palatable, clear green elixir containing prophenpyridamine maleate and phenylephrine hydrochloride. It is particularly useful in the management of nasal congestion, allergic rhinitis, spasmodic bronchial coughs and asthma.

Heyden has released Neomycin-Bacitracin Ointment, called Bacimycin, a colorless, stainless, soothing ointment, which creates a wide, new spectrum of anti-bacterial activity. The company reports that most bacteria involved in skin infections are controlled by neomycin and the few that are resistant to neomycin are effectively controlled by bacitracin.

Bristol Laboratories have released Flo-Cillin Aqueous-DS in a new strength which contains 400,000 units of Procaine Penicillin G plus 1 gm. of Dihydrostreptomycin in each 3-cc. dose. The regular Flo-Cillin product contains 400,000 units of Procaine Penicillin G and 0.5 gm. Dihydrostreptomycin in each 2-cc. dose.

Bayer has introduced a new flavored aspirin for children which retails at 15 cents for twenty-four 2½-grain tablets.

Sharp & Dohme has released Redisol Elixir, a new dosage form of vitamin B_{12} for stimulation of appetite.

Squibb has also prepared Noctec, a chloral hydrate solution, which induces sound refreshing sleep without hangover, and is said to be one of the safest and most effective agents for nocturnal sedation. Noctec Solution is an aromatic, orange-flavored solution containing 7½ grains of chloral hydrate per teaspoonful.

In order to provide increased injectable penicillin dosage in a single disposable unit, Squibb has announced the availability of the Crysticillin Suspension Unimatic Syringe containing 600,000 units of procaine penicillin G in stable aqueous suspension.

Abbott has prepared three new products: Hyazyme (the Abbott trademark for hyaluronidase), a white lyophilized powder which becomes a clear solution when dissolved in water for injection or normal saline solution; Sulestrex Piperazine Sub-U-Tabs and Sulestrex with Methylestosterone Sub-U-Tabs, water-soluble tablets free from unpleasant taste or odor; and Gemonil (Metharbutal, Abbott), for the treatment of grand mal, petit mal, myoclonic epilepsy, and for mixed types of seizures.

The tablets are made with a slow-dissolving base, shaped for comfortable retention sublingually or buccally. Estrogens so absorbed enter the systemic circulation and are carried directly to the destined organs, bypassing partial inactivation by the liver.

New Perfection DROPPING PARTS

For Attractive Appearance . . .
. . . Perfect Performance

The New Perfection line of dropping parts is designed to meet your exacting demand for modern-looking units that function perfectly. We know that the user's satisfaction with your product may depend upon the reliability of the dropper—And, New Perfection dropping parts present your preparation at its very best.

The New Perfection reputation for excellence is maintained by use of the best quality materials, scrupulous attention to cleanliness and rigid inspection of all parts before delivery.

DROPPER GLASSES

are available in a wide variety of styles and sizes; plain or CALIBRATED in any color to mark specific dosages.

BULBS

are supplied in many styles and colors. Oil Resisting AMEKINE synthetic rubber is used for oil preparations; natural rubber is supplied for other products.

CAPS

of plastic or metal, can be furnished in a complete range of sizes and colors.

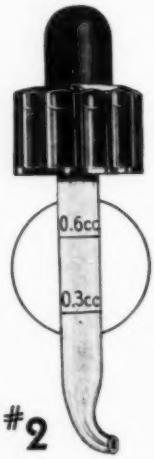
BOTTLES

in an attractive modernistic style in Amber, Blue, Green or Clear glass, are available, complete with dropping parts, in the following sizes: 2 cc., ⅛, ¼, ½, 1 and 2 oz.

DROPPER GLASSES CAN BE

CALIBRATED
IN COLOR

An inexpensive extra that adds great convenience to the use of your preparation. The dosage you desire in the color you specify is accurately and permanently printed on the dropper glass. Trade-marks and firm names can also be imprinted.



We Can Supply Dropping Parts To Fit Your Bottles or Furnish Complete With Our Own Bottles

Write for Samples and Quotations

PENNSYLVANIA GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. Craig Street • Pittsburgh 13, Pa., U. S. A.

friends

Cosmetics are used every day . . . your product is used because of the fine job it does.

H-A Cosmeticware is designed to make this a friendly use.

Handsome, easy to handle and readily identified, these dressing table accessories build re-order goodwill.

Hazel-Atlas Glass Company

WHEELING, W. VA.

THE THIRD EDITION OF

MODERN COSMETICS

MODERN COSMETICS, published by the Drug & Cosmetic Industry, was the first book on the formulation and manufacturing procedure of cosmetics to be published in America. It was an immediate success. In two previous editions eight thousand copies were sold in America and in forty-two foreign countries.

The Second Edition of MODERN COSMETICS has been out of print for three years. During that time we have received more that a thousand inquiries for this work. But rather than bring out a hurry-up job to meet the urgent demand we decided to wait.

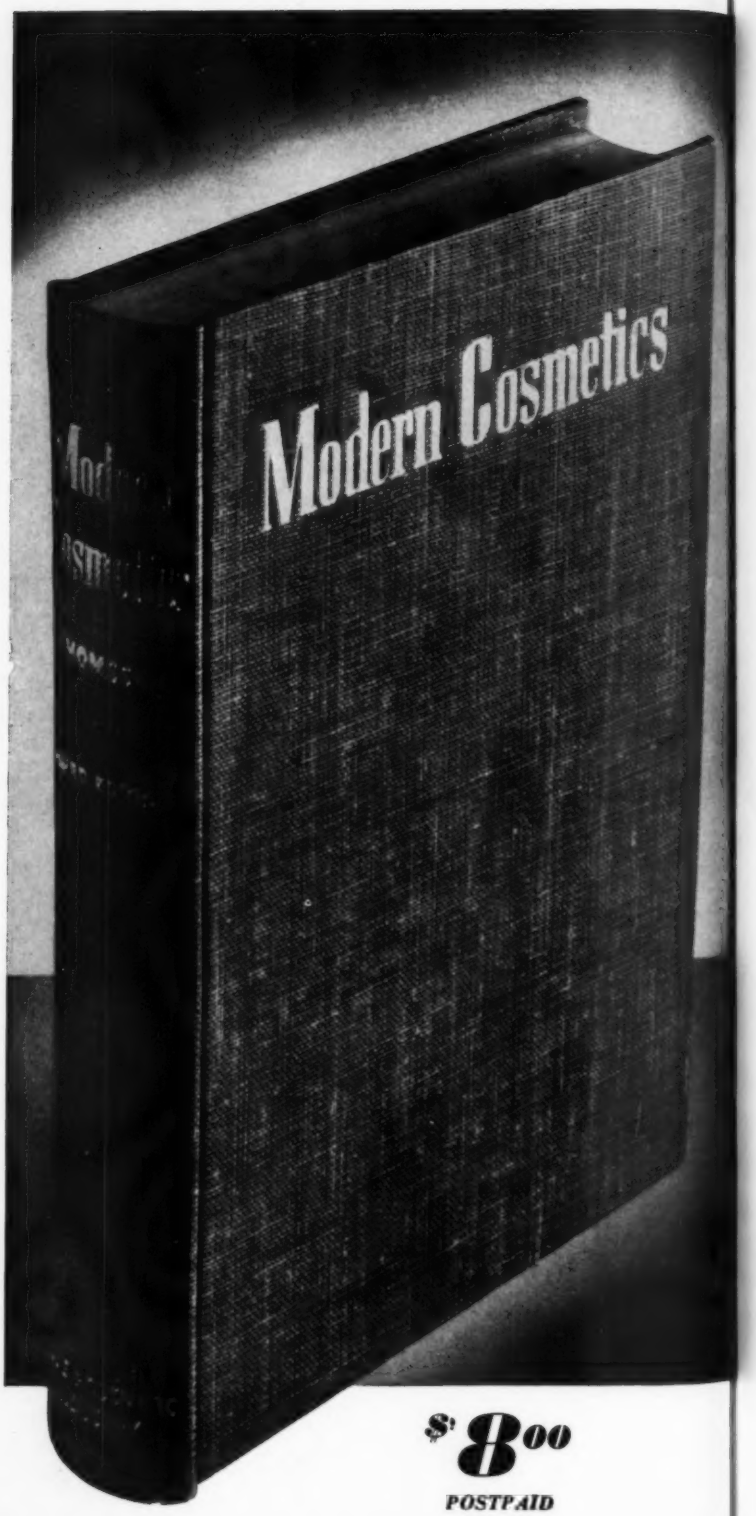
E. G. Thomssen, B.S., A.M., Ph.D., Chemical Consultant, Author of "Soap Making Manual," "Modern Soap Making," and well known contributor to Technical literature, was engaged to completely rewrite this new Third Edition—to bring to it all the new developments of the past ten years in manufacturing instructions, materials, and formulas.

To those who have made MODERN COSMETICS their handbook we say—this new edition will be infinitely more useful to you, because of the scope of new material, new tested formulas, and the correction and modernization of the procedure in formulation.

Chemist, factory manager, perfumer, owner—anyone interested in cosmetics will find MODERN COSMETICS a valuable help in business. It is a technical book, filled with formulas, procedure, manufacturing practices, yet so clearly and simply written that even one not connected with the industry can understand its text.

The most experienced chemist or factory manager will find in its wealth of information, useful methods new to him. The inexperienced man or woman who wants a clear understanding of the industry, wants to know something about how cosmetics are made, who is working on a small scale with the handicap of little experience or knowledge, will find the book easy to understand, a great help and guide.

To those who wish to procure MODERN COSMETICS, to the newcomers in the industry, we say—here is a book that, because of its completeness, the simple and easily followed instructions, the clearness with which every problem and every phase of cosmetic manufacture is discussed, the authority of a standard work, is well worth its weight in gold to you. For with it, you have a firm, thorough understanding of cosmetic manufacturing.



MODERN COSMETICS

by **E. G. THOMSSEN**
B.S. A.M. Ph.D.

644 Pages — 70 Chapters

$8.00
POSTPAID

DRUG & COSMETIC INDUSTRY
101 West 31st Street — **New York 1, N. Y.**

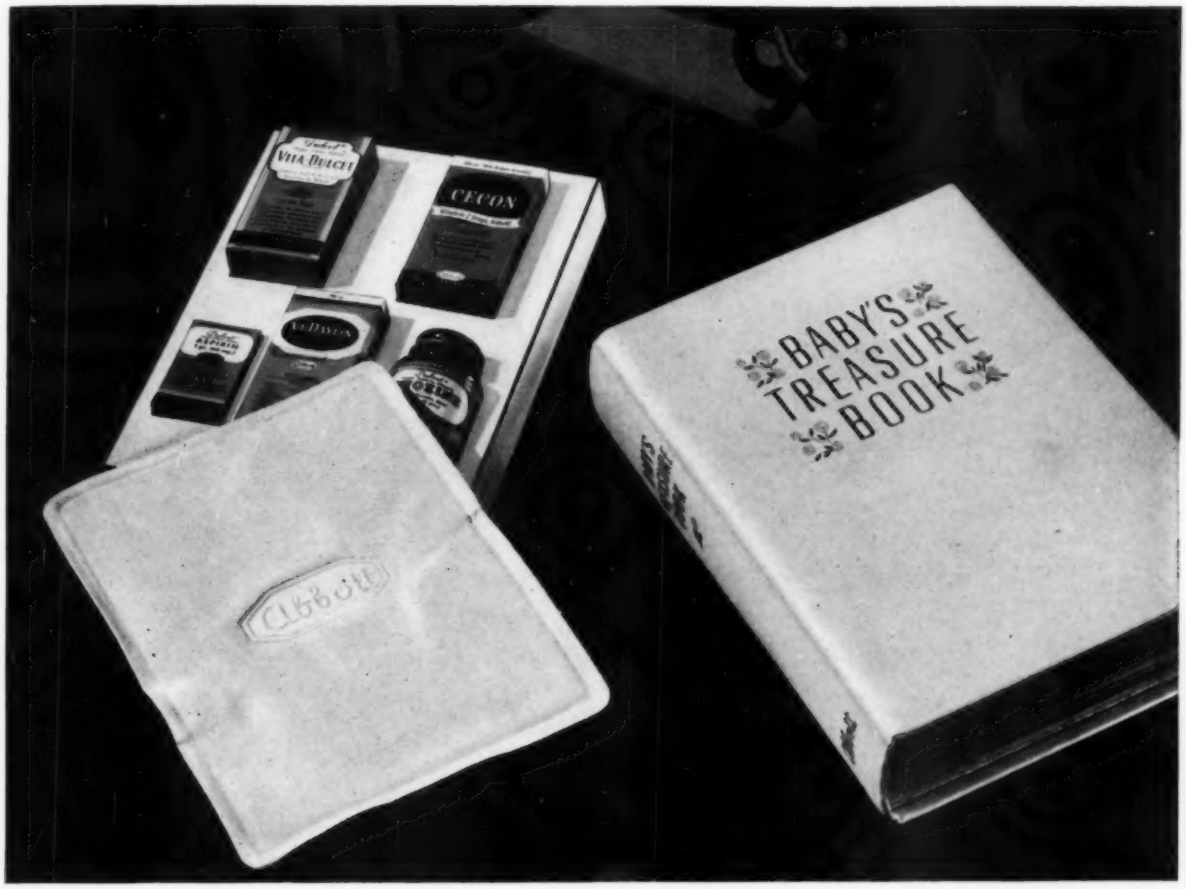


Photo courtesy of Abbott Laboratories

Custom Protection

—the safe, smart way to package pharmaceuticals

How frequently a carefully manufactured product is destroyed or damaged on its way to market due to inadequate packaging protection! Yet there's no excuse for costly shipping damage, as KIMPAK* has proved time and again. In the "Baby's Treasure Book" for example, Abbott Laboratories use interior pads of KIMPAK, top and bottom, to provide a decorative-protective cushioning that absorbs shock, prevents movement and eliminates rubbing of label. KIMPAK will absorb 16 times its own weight in moisture within 30 seconds to comply with parcel post regulations—and gives you more protection than most materials of greater weight and density. Clean, soft and flexible, KIMPAK is ideally suited for packaging all types of pharmaceuticals—tablets, capsules, liquids in bottles, jars, tubes, vials and ampoules. For complete information, write Dept. J-7, Kimberly-Clark Corporation, Neenah, Wis.

KIMPAK INTERIOR PACKAGING

A Product of **Kimberly-Clark**

*T.M. REG. U.S. & FOREIGN COUNTRIES

Our N-30 line of machine made, flint glass bottles is made up of 9 sizes ranging from 1/8 ounce to 8 ounces. They can be supplied plain or decorated to your specifications with fired-on ceramic labels.

CARR-LOWREY GLASS CO.

Designers and manufacturers of fine glass containers

Factory and Main Office: BALTIMORE 3, MD. • New York Office: 40 W. FORTIETH ST. • Chicago Office: 1572 MERCHANDISE MART

We turn the page to "FREON" propellents

. . . made practical through Du Pont research

As Du Pont observes the 150th anniversary of the founding of the company in 1802 by Eleuthère Irénée du Pont de Nemours, it is interesting to note the vital part research has played in developing many products throughout the years.

From the humble beginning in a fieldstone mill along the banks of Brandywine Creek near Wilmington, Delaware, research has held a place of high concern in the development of Du Pont's "Better Things for Better Living . . . *through Chemistry.*" Such research has produced a long list of now familiar products: cellophane, rayon, nylon, "Orlon", "Freon" propellents, and there are many more. Each filled a definite existing need. For example:

Early during World War II, Uncle Sam recognized the need for a more effective way of combating jungle insects. Malaria was an evil enemy. Working on the problem, members of the Department of Agriculture developed the principle of dispensing insecticides by means of a liquefied gas. This formed the basis of the well-known "Bug Bombs," of which our armed forces used some 50,000,000 units.

The propellent used in these forerunners of today's pressure-packed aerosol products was the Du Pont compound "Freon-12"—dichlorodifluoromethane. It proved to be ideal for the purpose . . . nonflammable, nonexplosive, virtually nontoxic, and chemically pure.

Immediately following the war, aerosol insecticides in high-pressure containers (approx. 70 lb./sq. in. gauge), using "Freon-12" as a propellent, were made available to the public. In an effort to lower the price of these products it was concluded, again through research, that a moderate pressure of around 40 lb./sq. in. gauge would be satisfactory. A propellent solution of "Freon-12" and "Freon-11" was developed providing this lower pressure.

In 1947 the low-pressure container was introduced, and the number of aerosol-packed products expanded rapidly. Today, the list includes deodorants, shave creams, plastic coatings and a wide variety of household, commercial and industrial aerosols. And with development of new "Freon" propellent solutions there is now a "Freon" propellent for every aerosol application.

But research is a never-ending effort. Progress demands it. That is why research has become an indispensable, integral part of Du Pont's continuing program of product improvement. It is one reason why "Freon" propellents are now unhesitatingly approved by those associated with this rapidly growing industry. E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.

DU PONT
REG. U. S. PAT. OFF.
150th Anniversary
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

KINETIC

FREON

SAFE PROPELLENTS

"Freon" is Du Pont's registered trade-mark for its fluorinated hydrocarbon propellents

SPRA-TAINER Does It Again!

ANESTHETIC SPRAY GIVES QUICK RELIEF FROM PAIN

AMERICAINE AEROSOL, product of Americaine, Inc., of Evanston, Ill., is a topical anesthetic liquid which s-p-r-a-y-s from pressurized SPRA-TAINER. Used by physicians in industrial and office first aid, it brings quick relief of surface pain and itching caused by burns, abrasions, lacerations, debridement of wounds, occupational dermatoses, etc. SPRA-TAINER is ideal for AMERICAINE AEROSOL because the quick, sanitary spray-on application makes it unnecessary to touch areas of pain.

SPRA-TAINER, with its "No Side Seam—No Top Seam" construction, was the start of low-pressure packaging. Now *Products That Spray Lead the Way . . .* for the Modern Design of SPRA-TAINER *SELLS YOUR PRODUCT!*

Leadership in the invention and manufacture of fine cans is carried through Crown's Complete Line of Cans for almost every purpose.

One of America's Largest Can Manufacturers

CROWN CAN

Division of

CROWN CORK & SEAL COMPANY

PLANTS AT PHILADELPHIA, CHICAGO, ORLANDO • BRANCH OFFICES: NEW YORK, BALTIMORE, PITTSBURGH, ST. LOUIS

Sheffield—first to put toothpaste in tubes, in 1892—has served packagers for over half a century in producing billions of tubes for—

MEDICINAL ointments — salves — jellies—extracts.

DRUG AND COSMETIC pastes—creams — shaving preparations — deodorants—depilatories.

INDUSTRIAL AND HOUSEHOLD cements — adhesives — compounds — greases — paints — fillers — food pastes, syrups, and creams.

YOUR *RELIABLE* SOURCE FOR COLLAPSIBLE TUBES

Through periods of ready supply and shortages alike, hundreds of leading firms have relied solely on The Sheffield Tube Corporation to furnish all their tube requirements. Why not place your confidence in Sheffield's century-long record of service!

You can depend on Sheffield's continuity of manufacturing experience to produce *value* all the way. Call on the Sheffield representative nearest you for information and assistance.

All types of tin, tin-coated, aluminum, lead, and Sheffalloy tubes. Free samples, and catalog. Remember, packaging in Sheffield Tubes gives your product a container that is . . . Sturdy • Safe • Sanitary • Smart • Convenient.

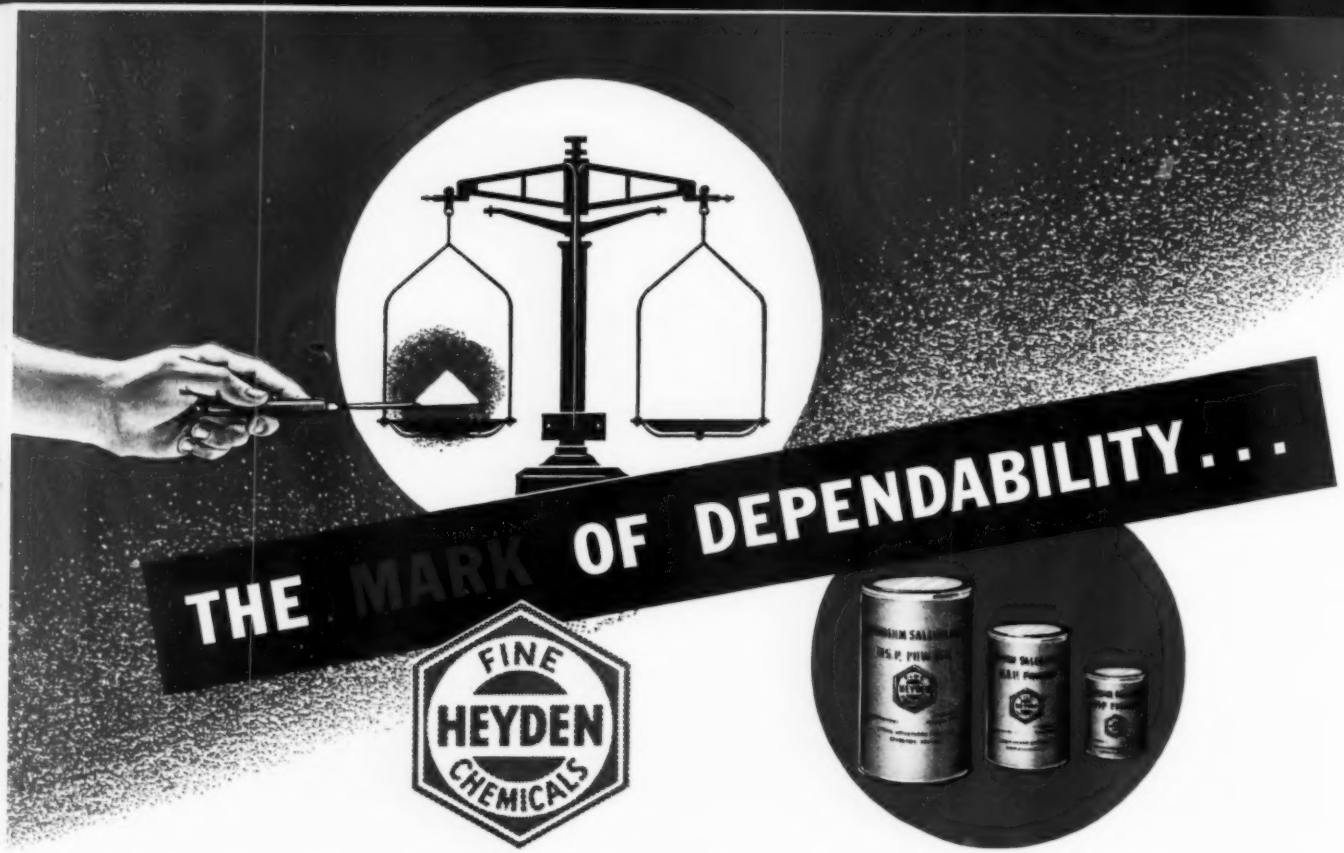
THE SHEFFIELD TUBE CORPORATION

HOME OFFICES • NEW LONDON, CONN.

W. K. SHEFFIELD, V. P. NEW YORK 18, N. Y., 500 5th AVE. | CHARLES ARCH CHICAGO 16, ILL., 3132 CANAL ST. | T. C. SHEFFIELD LOS ANGELES 38, CAL., 7024 MELROSE AVE.

EXPORT: 500 FIFTH AVE., N. Y. CABLE "DENTIFRICE", NEW YORK

New England SHEFFIELD PROCESS TUBES



SALICYLIC ACID

The Heyden hexagon has always been the symbol of dependability and quality in chemicals. Years of experience in manufacturing Salicylic Acid and its derivatives assure you of purity and uniformity in these important products—whether in prescription quantities or truckloads.

If your formulations require Salicylic Acid or any of the Salicylates listed below—for use as an intermediate; in ointments; in tablets; in many other applications—standardize on Heyden for assurance. Samples and further information will be forwarded promptly on request.

FOR PRESCRIPTION AND MANUFACTURING USE . . .

●

SODIUM SALICYLATE U.S.P.
Large Crystals, Flo Crystals or Powder

METHYL SALICYLATE U.S.P.
(Oil of Wintergreen, synthetic)

ACETYLSALICYLIC ACID U.S.P.
Crystals or Powder
(also Starch Granulations)

PHENYL SALICYLATE N.F.
(Salol)
Granular or Powder

AMMONIUM SALICYLATE N.F.
Crystals

CALCIUM SALICYLATE
Powder

LITHIUM SALICYLATE N.F.
Powder

MAGNESIUM SALICYLATE
Powder

STRONTIUM SALICYLATE N.F.
Powder

Serving Industry Through Finer Chemicals

BENZALDEHYDE • BENZOATES • BENZYL CHLORIDE
BROMIDES • CHLORINATED AROMATICS
CREOSOTES • FORMALDEHYDE • FORMIC ACID
GLYCEROPHOSPHATES • GUAIACOLS
HEXAMETHYLENETETRAMINE • MEDICINAL COLLOIDS
METHYLENE DISALICYLIC ACID • PARAFORMALDEHYDE
PARAHYDROXYBENZOATES • PENICILLIN • PENTAERYTHRITOLS
PROPYL GALLATE • RESORCINOL • SALICYLATES
SALICYLIC ACID • STREPTOMYCIN

FINE HEYDEN CHEMICALS

HEYDEN CHEMICAL CORPORATION
393 SEVENTH AVENUE, NEW YORK 1, N. Y.
CHICAGO • PHILADELPHIA • SAN FRANCISCO • DETROIT • PROVIDENCE

News...

Executive Advances at Strong Cobb

Walter F. Wargell has been elected vice-president of Strong Cobb & Co., Inc., and Ben T. Howiler, formerly vice-president, has become general manager of the West Coast operations, according to George Miller, president. Appointed assistant to the president some months ago, Mr. Wargell now carries the title of vice-president and assistant to the president. Mr. Howiler was made assistant vice-president of sales in April, 1951, and vice-president in charge of the private formula division in March of this year.

WALTER F. WARGELL

Park-Davis Executive Promotions

Dr. Leon A. Sweet has been elected vice-president and director of research, Parke, Davis & Co., and W. R. Jeeves, vice-president and director of overseas operations, according to Harry J. Loynd. Dr. Sweet has been director of research since 1949, and Mr. Jeeves, director of overseas operations since February, 1951.

Perfumer Membership Rules Changed

The American Society of Perfumers, Inc. held a special meeting on June 18 at the Advertising Club in order to amend the membership requirements of its by-laws. Membership in the Society had previously been confined to perfumers in the aromatics industry, excluding owners and part-owners. The new amendments have broadened these requirements so that any perfumer in the industry may now apply for membership.

Membership applications are obtainable from the secretary, William H. Barlow, 215 Pearl St., New York 38.

Crest Labs. Holds Open House

Crest Laboratories, Inc., Burbank, California, private label manufacturer, held open house during the week of June 2 to 6 at their new plant. More than 500 customers and friends in the trade attended, each visitor receiving a miniature cardboard freight car containing a gift bottle of multi-vitamins and featuring the company's slogan, "From a Capsule to a Carload."

The company was organized five years ago by A. R. Tutschulte, president, with J. G. Galindo, director of product development; Parker Schwamb, director of sales; Louis Despie, technical consultant; and Robert Schwamb, general counsel. This original staff has increased to a total of 130 and sales volume has grown from $40,000 in 1946 to an estimated $1,500,000 in 1952.

BEN T. HOWILER

Breck Consolidates Facilities

John H. Breck, Inc. transferred its manufacturing, warehousing and shipping operations to the new Breck plant during the early part of June on Lowell Ave., West Springfield, Mass. All other executive and administrative functions will be carried on in Springfield as in the past. This move will consolidate operations formerly conducted on the second floor of the Dwight St. Building and in a leased warehouse on Broad St. in Springfield. The New Breck property, purchased from Container Associates last December, includes a one-story brick building containing 50,000 square feet of floor space, a railroad siding and outdoor storage areas located on eight acres of land.

Webb, Sales Mgr., W. J. Bush

Richard D. Webb has been appointed sales manager of W. J. Bush & Co., Inc., succeeding Cecil Rice who, owing to ill health, has moved to Los Angeles to head that division of the company.

Merck Fellowships Awarded

Eight Merck fellowships with stipends ranging from $3500 to $4500 have been awarded for the academic year 1952-53 by the National Research Council. They were presented to eight men for study at four institutions in the United States, one in Canada, and one in England. A similar fellowship program has been established in Canada by Merck & Co. Ltd., Merck's Canadian Subsidiary, and is administered there by the National Research Council of Canada.

Northam Warren Executive Changes

John M. Volkhardt has been appointed to the newly created post of merchandising manager at Northam Warren Corp., and will be assisted by Gordon Cheney. Mr. Volkhardt joined the company in 1950 as assistant to the vice-president and general manager.

JOHN M. VOLKHARDT

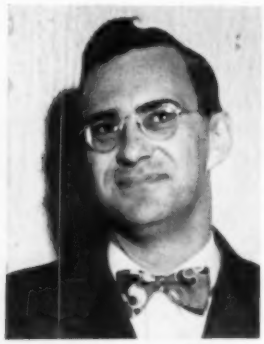
Retire from Parke Davis

Alan Stuart, salesman in Lower Michigan for Parke, Davis & Co., and Frank G. Ebner, connected with medical sales work in Northeast Detroit, retired from that company last month. Mr. Stuart joined Parke-Davis in 1906 in the shipping department and three years later, at the age of 22, was sent on the road, covering the upper half of Michigan for the subesquent two years. He was then transferred to the Bombay, India, branch returning in 1918 to enlist in the U. S. Navy and later resumed his duties as a salesman in 1919 in Lower Michigan, where he has served ever since.

Mr. Ebner joined the company in 1917 as an editorial assistant on various publications and was promoted to manager of druggists' advertising in 1919. During the next 10 years he was responsible for the production and distribution of all promotion material for druggists, and has been in medical sales work in Northeast Detroit since 1932.

Merrell Executive Changes

Dr. H. R. Kreider has been promoted to associate director of the scientific laboratories, the Wm. S. Merrell Co., and Dr. Robert S. Justice has been appointed head of the pharmaceutical research department, according to Dr. H. W. Werner, director of the laboratories.



DR. H. R. KREIDER

Fragrance Found. Committees

The Fragrance Foundation has appointed new members for the year 1952-1953 to four of the five standing committees, according to Samuel Rubin, president. Owen Stoner, of Prince Matchabelli, has been named chairman of the Trade Relations committee, the other members being Charles Granville, Angelique & Co.; M. J. Middleton, Parfums Ciro; Keith Porter, Harriet Hubbard Ayer; and Leo Talamini, Schiaparelli. Chairman of the Educational Publicity committee is Kathleen Spencer Cory, Coty, assisted by Amelia Bassin, Faberge; Grace Coppage, Bourjois; Jill Jessee; Kay Torrey, Beauty Editor, *Charm;* and Marie Travers, Angelique.

Serving on the Public Relations committee with Donald Bryant, Hudnut Sales Co., as chairman, are Charles Bryan, Firmenich & Co.; Hazel Cades, Good Looks Editor, *Woman's Home Companion;* and E. K. Stoyanoff, Guerlain.

The Quarterly Luncheon committee, Thomas Haire, *Cosmetics & Toiletries*, chairman, includes Pierre Coutin, Roure Dupont; Bernice Peck, Beauty and Health Editor, *Mademoiselle;* J. H. R. Stephenson, Givaudan-Delawanna, Inc.; Herbert Storfer, Parfums Corday; and Alvin Welzel, Houbigant.

The fifth standing committee of the Foundation, the Membership committee, is automatically under the chairmanship of the Treasurer, Frazer V. Sinclair, publisher of BEAUTY FASHION.

Hooker Appointments

Herbert K. Holden has been appointed salesman in the Niagara sales territory of Hooker Electrochemical Co., according to R. E. Wilkin, general sales manager. Dr. Eugene T. Miller and Alfred W. Toon have been appointed to the engineering department.

DR. ROBERT S. JUSTICE

Haring Represents Kalix Line

Haring Equipment Corp., 533 West Broadway, New York, has been appointed exclusive distributor in America for the Kalix Line of automatic filling machines for tubes and jars and other packaging equipment. The sale of these machines is being handled under the direction of Doane Hage who for 30 years had formerly represented Arthur Colton Co. in the New York area.

Haring has appointed the Miller Sales Co. of Chicago as representative for Illinois, Indiana, Michigan and lower Wisconsin.

20 Years for "U.S.I Chem. News"

U. S. Industrial Chemicals Co. last month gave a reception at the Downtown Athletic Club to mark the 20th anniversary of its monthly *U. S. I. Chemical News.* This news-insert advertisement has been appearing in publications in this field since 1932, at which time the name was *Solvent News, U. S. I.* It was a new idea in advertising and had the purpose of furnishing members of the industry and customers with up-to-date information on the markets, prices and developments in the field.

Since that time 241 issues have been printed on light blue stock, a trademark, and it now appears regularly in seven publications. An additional 12,000 members of chemical and related industries receive the News in the form of a 4-page mailing piece.

Avon Plant in Delaware

Avon Products, Inc. has signed a long-term lease with the Danita Hosiery Corp. for a modern one-story building at 200 Chapel St., Newark, Delaware, at a reported rental of $500,000. In addition to the hosiery plant, the adjoining property formerly owned by Norman Battersby was acquired by lease at the same time and will be improved by Avon and used in conjuntion with the new plant operations.

This plant will be used by Avon as a branch office and for shipping, warehousing and light manufacturing and will serve the states of Delaware, Maryland, Virginia, southern New Jersey and, later, North Carolina.

Robert Lincoln McNeil, left, president of McNeil Laboratories, wishing George M. Lopez success in taking over McNeil activities in Puerto Rico. Alfred G. Leal, far left, off to other Caribbean countries, and Clark H. Johnson, director of foreign sales, look on.

SENSATIONAL NEW COFFEE IMITATION ANNOUNCED

Authentic Felton Reproduction, Felcafé, Revolutionizes Use of Coffee Flavor In Vast New Fields

As a result of several years of research and development, Felton Chemical Company chemists have produced a new coffee flavor that has revolutionized the use of coffee in many products. Candy, ice cream and baked goods manufacturers have long been aware of the handicaps presented by the lack of stability of coffee flavor concentrates, and it was this problem which Felton tackled first. Literally hundreds of new chemicals were isolated in the research for proper ingredients, and at least fourteen new specific aromatics were developed.

Never before has a product been developed in accordance with so many important matters as in Felcafé. Not only was no distortion found in any of the products Study carefully the process as outlined in the ingredients were listed. Most important Felton contributed to science by doing Never before has a product been developed in accordance with so many important matters as in Felcafé. Not only was no distortion found in any of the products Study carefully the process as outlined in the ingredients were listed. Most important Felton contributed to science by doing Never before has a product been developed in accordance with so many important matters as in Felcafé.

75 Times Stronger Than Coffee

Felcafé has been found to be at least 75 times stronger than coffee, and its economy is quickly obvious to any manufacturer. Thousands of batch tests have been made, not only by Felton, but by manufacturers using flavors, and based on the commercial conditions of manufacture in the candy, ice cream, dessert, beverage and extract fields. Felcafé has proven its record-breaking economy.

Will Not Cook or Freeze Out

Felton's unusual flavor is non-volatile, and its stability eliminates any worry about cooking off or freezing out. Neither does it oxidize or become rancid.

Candy Manufacturers Applaud Advantages

Felcafé retains its full-bodied flavor in Hard Candy, Toffee, Caramels, Fudge, Soft Centers, Creams and Fondants, Marshmallows, Gum, Starch Jellies, Chocolate.

Ideal for Foods and Desserts

Popular coffee flavor can now be successfully applied to Ice Cream, Ices and Sherbets, Packaged Ice Cream Mixes, Puddings, Syrups, Beverage Concentrates, Gelatin, Pie Fillings, Cake Fillings, Icings, Toppings, Sandwich Fillings, Carbonated Beverages, Extracts.

Versatility of New Flavor for Pharmaceuticals

Coffee as a flavor for pharmaceuticals can be a big factor in the success of all kinds of products such as Pharmaceuticals, Lozenges, Troches, Vitamin Tablets, Cough Syrup, Elixirs.

Write For Samples of This Amazing Coffee Flavor

Tell us about the products in which you would like to use Felcafé. We will be happy to send you directions and liberal samples for testing.

FLAVORS • ESSENTIAL OILS • AROMATICS

FELTON CHEMICAL COMPANY, INC.
599 Johnson Avenue, Brooklyn 37, N. Y.
PLANTS: Brooklyn, N. Y. • Los Angeles, Cal. • Montreal, Que. • Paris, France
SALES OFFICES: Atlanta • Boston • Chicago • Dallas • Philadelphia
St. Louis • Toledo • Toronto

Stocks Carried in Principal Cities

U. S. P. Glycerine—in Mennen Lather Shave—has contributed to billions of smooth, close, satisfying shaves over the years. Indeed, for some 30 years this natural plasticizer and humectant has helped to keep Mennen cream uniform and smooth.

FULLY ACCEPTED... FULLY AVAILABLE IN ALL GRADES!

The field of men's toiletries brings virtually all of Glycerine's properties into play. In after-shave lotions . . . brushless creams . . . hair tonics and the like, Glycerine may serve as a vehicle, solvent, penetrant or anti-freeze!

Toothpastes employ as much as 25 per cent of Glycerine in their composition . . . since it protects this type of product against possible change from a smooth-flowing paste into a "hard-to-squeeze" mass.

Glycerine is safe to use . . . widely applicable . . . in full supply! It helps maintain the marketability of old formulae . . . and contributes sales-building advantages in new brands of cosmetics or toilet goods. Why not review some of these advantages? Write for your copy of "Why Glycerine for Drugs and Cosmetics?"

GLYCERINE PRODUCERS' ASSOCIATION

295 Madison Avenue, New York 17, N. Y.

VINCENT J. PIGORS

ARNE E. STENSBY

Pigors Appointed by Ames

Vincent J. Pigors has been appointed sales promotion manager of the Ames Co., Inc., according to George W. Orr, Jr., vice-president in charge of sales. He has been with Ames since 1945 as a member of the professional service staff.

New Brazilian Subsidiary—Merck

Merck & Co., Inc., has established a new Brazilian subsidiary, according to James H. Sharp, president of Merck (North America) Inc., which will help that country maintain adequate supplies of vitally needed drugs and essential chemicals in spite of its current dollar shortage.

The new company, Industrias Farmaceuticas Merck (Norte Americana) S. A., has its main operating office and warehouse in Sao Paulo and an office in Rio de Janeiro, with James W. Balano as director-president, and Rusvel Tinoco Pinto, director-manager.

In addition to supplying Brazil with vitally needed drugs and chemicals, the subsidiary will employ detail men who will visit hospitals and doctors throughout the country bringing them the latest information on the newest therapeutic agents available.

Governor Lodge Speaks at DCAT

Governor Lodge of Connecticut addressed the spring luncheon meeting of the Drug, Chemical and Allied Trades section of the New York Board of Trade at the Hotel Astor on June 11. He spoke on the progress made in the drug and chemical laboratories in the fight on disease. Charles M. Macauley, Charles M. Macauley & Associates, chairman of the DCAT, opened the meeting and, Howard B. Fonda, senior vice-president, Burroughs, Wellcome & Co., introduced Governor Lodge. Lloyd I. Volckening, president, the Ivers-Lee Co., was program chairman.

Stensby Appointed by Merrell

Arne E. Stensby has been appointed associate chief of professional service, the Wm. S. Merrell Co., according to Frank T. Jacobs, director of marketing.

Lakeside Changes Scientific Dept.

The pharmacy department of Lakeside Laboratories, Inc., has been changed to the pharmaceutical department and is now headed by Harold C. Krahnke, formerly chief control chemist. The new analytical and control department will have Elmer Kluchesky as chief. He has been promoted from the control department.

Black with Stanley Drug

Floyd I. Black has been appointed head of the research and product-development laboratory of Stanley Drug Products, Inc., according to E. A. Bachman, president.

Old Empire Enlarges Capacity

Old Empire Manufacturing Chemists, Inc. has purchased the complete plants of two of the larger private label organizations formerly located in the Newark, N. J., area. This has enabled the company to maintain a collapsible-tube production rate of 500 to 600 gross a day and an automatic-liquid filling rate of 200 to 300 gross a day.

Paul Miksovic has been promoted to the newly created position of chief engineer and Albert Poet has been named as his assistant. Before his promotion, Mr. Miksovic supervised the installation of new equipment, among which is a collapsible tube filling machine, custom built to the company's specifications, which can fill, close, and crimp giant size tubes up to a size of 2″ x 10″, fully automatic.

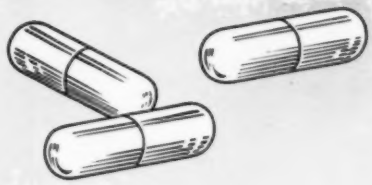
Walter F. O'Connell has been appointed assistant to Mr. Hanes. He had formerly operated his own tax and financial consulting firm in Greensboro, N. C., devoting considerable time to southern operations of Olin Industries.

Sickels Named Director, MEA

Ralph G. Sickels, director of advertising and public relations for Parke, Davis & Co., has been elected to a two-year term as a national director of the Medical Exhibitors' Association, Inc. This organization met in Chicago recently during the 101st annual meeting of the American Medical Association.

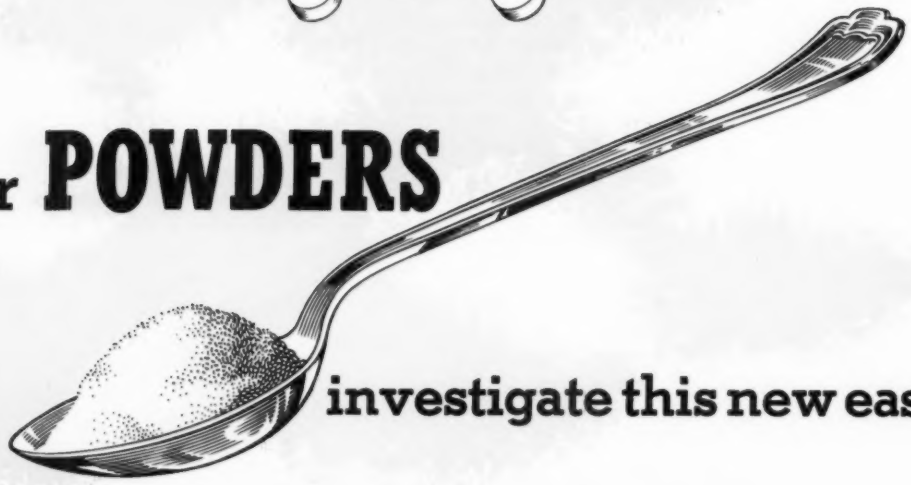
Henry Wendt, Jr., right, director of sales, Lederle Laboratories, presenting Achievement Trophy to L. Paul Roy at recent annual Gold Cup Meeting in Atlantic City. Mr. Roy is regional manager, Lederle Laboratories Division, North American Cyanamid, Ltd.

For Your Formulation of CAPSULES



TABLETS

or POWDERS



investigate this new easier-to-use

Baker ALUMINUM HYDROXIDE

Baker Aluminum Hydroxide, U.S.P., Dried Gel, in a new free-flowing form, will be welcome news to you as a drug or pharmaceutical manufacturer.

There are a number of reasons why this Aluminum Hydroxide provides more convenient handling for capsules, tablets and powders. It flows more freely. It is less dusty. It pours rapidly from containers without sticking. It mixes more freely in formulations. Capsules fill with far less difficulty.

You can also make smaller tablets with higher acid-consuming capacity because this Aluminum Hydroxide has greater density and improved antacid characteristics.

Baker Aluminum Hydroxide meets the Neutrality, Sulfate and other requirements of the U.S.P. Monograph.

Write for a test sample . . . then see for yourself how this new and improved product can help you in your formulations.

J. T. Baker Chemical Co., *Executive Offices and Plant,*
Phillipsburg, New Jersey.

Other Baker Chemicals for Antacid Preparations

Bismuth Subgallate
Bismuth Subcarbonate
Magnesium Carbonate
Magnesium Trisilicate
Magnesium Oxide
Bismuth Subsalicylate
Bismuth Subnitrate
Magnesium Hydroxide
Magnesium Phosphate

Baker CHEMICAL

Baker Chemicals

REAGENT • FINE • INDUSTRIAL

JOHN G. BILL

HENRY W. GADSDEN

STUART T. HENSHALL

S&D Executive Appointments

John G. Bill and Henry W. Gadsden, vice-presidents of Sharp & Dohme, Inc., have been elected to the board of directors, according to John S. Zinsser, chairman of the board. Stuart T. Henshall, comptroller, has become a vice-president.

Addresses Midwest Advg. Club

Dr. John W. Cline, president of the American Medical Association, spoke before the Midwest Pharmaceutical Advertising Club in Chicago on June 11, outlining three essentials for good advertising to reach physicians. These essentials were Truth, Taste and Terseness.

The luncheon was attended by medical advertising men from similar groups in New York and Philadelphia who were in Chicago for the annual meeting of the American Medical Association.

Glucuronolactone Booklet

The chemical division of Corn Products Refining Co. has published a booklet which surveys all of the current literature available on glucuronolactone. Copies may be obtained from the chemical division of the company at 17 Battery Place, New York 4.

Minneapolis S&D Branch Completed

Construction of the new Minneapolis branch of Sharp & Dohme, Inc. has been completed and was open for business on June 9, according to E. W. Metzger, director of domestic branches. The new building, located at 1301-11 Bryant Aves., North, is larger than the former quarters at 607 Fifth Ave. South, and is designed to meet the requirements of the company's rapidly expanding business in that area.

R. W. Quandt is manager of the Minneapolis branch and W. N. Stebbins, district sales manager.

Hon. Degrees for Loynd, Dunbar

Harry J. Loynd, president of Parke, Davis & Co., and Paul B. Dunbar, former commissioner of the Food and Drug Administration, received honorary doctor of science degrees from the Philadelphia College of Pharmacy on June 9. Dr. Ivor Griffith, president of the College said that the degree was conferred on Mr. Loynd "in recognition of the leadership which you have evidenced in the field of public health and human welfare."

Dabovich Appointed by Baker Chem.

Thomas C. Dabovich has been named sales manager of the industrial chemical division, J. T. Baker Chemical Co., according to Ralph A. Clark, vice-president in charge of sales. He will be responsible for guiding the division's expanded sales program. Mr. Dabovich joined Baker last month, having formerly been with Sharples Chemicals, Inc., Wyandotte, Michigan, where he was western regional sales manager.

Fragrance Foundation Moves

The Fragrance Foundation Inc. moved its offices on June 1 to One East 53rd Street, New York. The telephone number is ELdorado 5-3168.

Kimble Glass Co. Formed

American Structural Products Co., subsidiary of Owens-Illinois Glass Co., has changed its name to Kimble Glass Co., and on June 1 acquired the business and assets of the Kimble Glass division. Net assets of the subsidiary thereupon totaled more than $20,000,000.

Stanley J. McGiveran, vice-president of Owens-Illinois, and who, before the transaction, had been general manager of Kimble Glass division and president of American Structural Products Co., has become president of the subsidiary.

Merck Receives Hon. LLD Degree

George W. Merck, chairman of the board of Merck & Co., early last month received the honorary degree of Doctor of Laws from Rutgers University at its 186th Commencement in New Brunswick, N. J. He was one of 13 to be presented with honorary degrees by Dr. Lewis Webster Jones, Rutgers president.

Dr. Clark Retires from Lederle

Dr. Guy W. Clark, technical director, Lederle Laboratories division, American Cyanamid Co., retired on June 1 after 25 years of service. He made important contributions to the development of parenteral liver extract.

New Minneapolis branch of Sharp & Dohme, Inc., which was opened for business on June 9.

If cost fluctuations give you a

HEADACHE

Try our excellent substitutes

BERGAMOT S RD EXTRA
GERANIUM 1621 IMITATION
YLANG YLANG TAMATIVE SUPERIEUR

ROURE-DUPONT, INC.

ESSENTIAL OILS, AROMATIC CHEMICALS AND PERFUME BASES

GENERAL OFFICES
366 MADISON AVENUE, NEW YORK 17, N. Y.

CHICAGO BRANCH
510 NORTH DEARBORN

LOS ANGELES BRANCH
5517 SUNSET BOULEVARD HOLLYWOOD

SOLE AGENTS IN UNITED STATES AND CANADA FOR
ROURE-BERTRAND FILS et JUSTIN DUPONT
GRASSE (A. M.) FRANCE ARGENTEUIL (S. & O.) FRANCE

Strong Cobb Dinner Conference

The research staff of Strong Cobb & Co., Inc. recently held the first in a new series of quarterly dinner conferences at Tudor Arms Hotel, Cleveland. The program has been inaugurated for the purpose of integrating company research problems, and will allow each group to familiarize itself with the working problems of others, providing an interchange of ideas.

Poucher Named Honorary Member

W. A. Poucher was elected the first honorary member of the Society of Cosmetic Chemists of Great Britain at the fourth annual meeting held at St. Bride's Institute, London, last month.

Dr. R. H. Marriott was elected chairman of the Society for the coming year. Other officers elected are: F. V. Well, vice-chairman; F. Hulley, secretary; E. Polan, treasurer; and members of the council: H. W. Hibbott, H. Holmes, A. W. Middleton, and J. Pickthall.

Named to Charles Antell Posts

Raymond K. Meffen has been appointed director of the newly created professional division, Charles Antell, Inc., and Albert M. Behrens, has been named to the position of coordinating all advertising, publicity and point-of-sale material. Mr. Meffen had formerly been assistant sales manager of Bymart-Tintair, Inc., and Mr. Behrens, advertising and publicity director of Lentheric, Inc. and Elizabeth Arden.

RAYMOND K. MEFFEN

Nathanson, V.P., Weiss & Geller

Don Paul Nathanson, director of advertising of the Toni division of the Gillette Co., has been named vice-president and a member of the Weiss and Geller advertising agency of Chicago, according to Edward H. Weiss, president of the agency. He will serve as supervisor on the Prom home permanent account, which will be handled by Weiss and Geller beginning August 1

First in new series of quarterly dinner conferences of entire research staff of Strong Cobb & Co., Inc., recently held at Tudor Arms Hotel, Cleveland, to interchange ideas, and iron out research problems among the various groups. Sixty-five chemists attended.

Volwiler, Director, Chem. Society

Dr. Ernest H. Volwiler, president of Abbott Laboratories, has been elected a director of the American Chemical Society to fill the unexpired term of Dr. Farrington Daniels, professor of chemistry in the University of Wisconsin. Dr. Daniels became an ex-officio member of the board of directors when he was named president-elect of the Society.

Dr. Volwiler, who was president of the Society in 1950, will serve on the board as regional director for the fifth district, which consists of Illinois, Indiana, Michigan and Wisconsin.

ALBERT M. BEHRENS

Chemist's Club Golf Tourney

Winners of the Chemists' Club golf Tournament at Bonnie Briar Golf Club, Mamaroneck, N. Y. on June 12, were: H. Bodel, 1st low gross; 2nd low gross, Ed Bush; 1st low net, R. D. Eshbaugh; 2nd low net, Dr. Offenberger; nearest to pin, W. J. Weed; longest drive, and C. W. French. One hundred sixteen members and guests of the Club attended the match.

Stokes & Smith Honors Employees

Stokes & Smith Co., subsidiary of Food Machinery and Chemical Corp., recently gave a dinner in honor of all employees and awarded service pins to the 250 members who attended. William R. Huguenin, plant manager, spoke to the group after dinner, and introduced John D. Crummey, chairman of the board of Food Machinery, who spoke on the various activities of the company.

The service pins were awarded to the various groups according to the length of service, there being 14 persons with over 40 years, 84 persons with 20 to 30 years, and other groups down to 5 years of service. Carl E. Schaeffer, sales manager, second oldest employee in length of service, made the acceptance speech for all of the groups. The arrangements for the dinner and meeting were completed by J. Russell Sonneborn, personnel director.

Marsh Named V. P., Transandino Co.

Dr. David F. Marsh, professor and head of Pharmacology at the School of Medicine, West Virginia University, has become executive vice-president and co-director of the Transandino Co., Palo Alto, California (R. C. Gill Laboratory for Curare Research). He received the John J. Abel award earlier this year, from the American Society for Pharmacology and Experimental Therapeutics, for his research in curare.

Cosmia Labs. Move

Cosmia Laboratories have moved their quarters to 115 University Place, New York 3. The telephone number is ALgonquin 4-6863.

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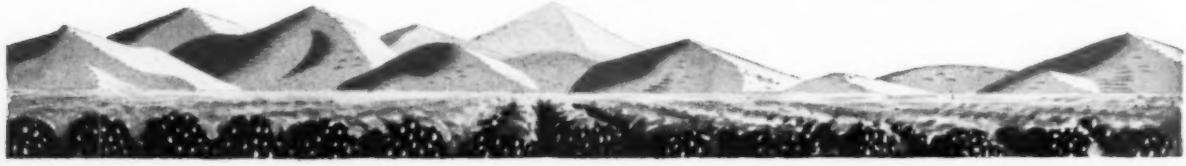


WILMORE H. MILLER

Miller Named Toni Vice-President

Wilmore H. Miller has been named a vice-president of the Toni division of the Gillette Co., according to R. N. W. Harris, Toni president. He will serve as brand supervisor for all permanent waving brands and head of export liaison. He had been with Bauer and Black for eighteen years before joining Toni.

Kohnstamm Awarded by N.Y.C.

Louis J. Woolf, president of H. Kohnstamm & Co. was presented a Certificate of Business Merit, on behalf of the company, by the City of New York in recognition of "One Hundred Years of Community Service. The ceremony took place on May 13 at a luncheon arranged for the presentation at the Waldorf-Astoria Hotel. The meeting was presided over by the Honorable Walter T. Shirley, Commissioner of Commerce, and Mayor Impellitteri addressed the group.

Penick Buys P & V Drug Inventory

S. B. Penick & Co. has purchased the entire botanical drug inventory of Peek & Velsor, Inc. in a transaction which did not include the purchase of that company's stock or buildings. The liquidation of Peek & Velsor as a corporation ends a business that was founded 112 years ago by J. A. Velsor. The son of the founder, also J. A. Velsor, was president and sole owner of the corporation, which in point of continuous activity was the oldest botanical drug company in the United States.

Hanger with Gair

Roland Thomas Hanger has been appointed assistant division manager of the Bogota container division of the Robert Gair Co., Inc., according to William T. May, Jr., vice-president in charge of container operations. He had previously spent six years with the Chatham Container Co. as vice-president and general manager.

Cawley, V.P., Miles Labs.

John A. Cawley has been made a vice-president of Miles Laboratories, in charge of the legal department, according to Walter R. Beardsley, president.

Brown Named Foundation Director

Francis C. Brown, president of Schering Corp., was elected one of the directors of the American Foundation for Pharmaceutical Education at its 10th anniversary meeting held recently in New York. A total of 106 graduate Fellows, studying in 32 universities, were supported by the Foundation last year.

Sherry Appointed by Thyavals

Robert Sherry has been appointed national sales manager for Thyavals, Inc., replacing George Johnston, who recently resigned. He had formerly been sales executive for Bauer & Black.

Lloyd H. Daviscourt, left, president of Thyavals, Inc., congratulating Robert Sherry on appointment as national sales manager, replacing George Johnston, who resigned.

Granddaughter for the Cardinals

Mrs. Walter A. Welsh, the former Lorene Cardinal, daughter of Mr. and Mrs. Paul J. Cardinal, gave birth to a 6½-pound baby girl, Lorene Frances, on May 30, in the Base Hospital at Fort Knox, Kentucky. Private Welsh is attached to the 108th Air Force and has been stationed since last December at Godman Air Base, Fort Knox. Mrs. Cardinal flew down to Kentucky from her home in Montclair, N.J., to be with the couple for a few days after the birth.

Ascher Moves to New Address

B. F. Ascher & Co., Inc. has moved from 901 East 10th St., Kansas City, to new and larger quarters at 113 West 18th St. Mail should be sent to P.O. Box 827; the telephone number remains Baltimore 3376. The move was made necessary because of increasing national distribution and sales volume.

Schering Executive Changes

Dr. E. B. Hershberg, cortisone expert, and Dr. Domenick Papa, co-inventor of Chlor-trimeton, have been named co-directors of scientific research by Schering Corp. The company has extended its research program into new fields of physical and analytical chemical research, in addition to biochemical, microbiological and pharmacological studies. Dr. Hershberg adds the co-directorship to his duties as director of Schering's natural products research department, and Dr. Papa will retain his post as director of Schering's synthetic medicinal research department.

Nelson Appointed by Tussy

E. M. Nelson has been appointed sales representative of Tussy Cosmetiques, covering eastern Idaho, Montana, Wyoming, Utah, Arizona, New Mexico, and El Paso, Texas.

100 Years for Leonhard Wax Co.

Theodor Leonhard Wax Co., Inc., Haledon, N. J., is celebrating its 100th anniversary this year in the refining and bleaching of Beeswax for the cosmetic and pharmaceutical industries. Theodor Leonhard established the business in Hastings-on-the-Hudson in 1852 and 5 years later it was moved to Haledon. The business continued under the sole ownership of Mr. Leonhard, founder, until his death in 1907 at the age of 90. Following his death, the style of the firm was changed to Estate of Theodor Leonhard, and the business was conducted by his sons, J. Henry Leonhard, Albert F. Leonhard and George L. Leonhard, now all deceased.

The company was incorporated in 1908. The present officers are William C. Leonhard, grandson of the founder, president; Rudolph J. Mayer, vice-president and general manager; and Theodor Leonhard, grandson, secretary and treasurer.

RUDOLPH J. MAYER

ROBERTSON B. CLARK

MAURICE F. SCHMIDT

R. D. TWOMEY

Mallinckrodt Promotions

Robertson B. Clark has become divisional sales manager for pharmaceutical chemicals for the Mallinckrodt Chemical Works, and has moved to St. Louis from the Pacific Coast where he was the company's regional sales manager.

Maurice F. Schmidt has been appointed the West Coast regional sales manager. He has been with Mallinckrodt for 26 years and for the last eight, has been operations manager of the Los Angeles warehouse and office.

R. D. Twomey, a sales representative in Southern California for 14 years, has been appointed pharmaceutical chemical sales manager for that area.

Dr. Corvi Visits Merrell Labs.

Dr. Camillo Corvi, agent for the Wm. S. Merrell Co. in Italy, last month visited the Merrell laboratories in Cincinnati.

Wilson, President of Schieffelin

Sturgis S. Wilson has been elected president of Schieffelin & Co., succeeding W. J. Schieffelin, Jr., now chairman of the board. Mr. Wilson joined the company in 1934 as credit manager and was elected treasurer in 1936. He became a director in 1939 and executive vice-president in 1950.

STURGIS S. WILSON

White Labs. New Plant Operating

White Laboratories' new $3,000,000 plant at Kenilworth, N.J. is now in full operation, the company having moved its headquarters to the new site after 27 years in Newark. Among the modern features incorporated in the new unit is an air conditioning technic, which frees tablet-coating rooms of dust. The special walls, made of tiny holes, or pores, allow conditioned air to flow without appreciable draft across the coating rooms to pick up the dust. The dust-carrying air is then drawn down into exhaust tunnels and passed through spray washers to remove the dust before the cleansed air is finally discharged above the plant roof. Another innovation is a large packaging room equipped with special high-speed assembly equipment. The main plant building is completely at the first-floor level.

Manufacturing Chemists Elect

William H. Ward, vice-president of E. I. du Pont de Nemours & Co., Inc., was elected chairman of the board of the Manufacturing Chemists' Association, Inc., at the 80th annual meeting last month at the Greenbrier Hotel. He succeeds Charles S. Munson, chairman of the board of Air Reduction Co., who was elected president of the Association. John E. McKeen, president of Chas. Pfizer & Co., and W. S. Richardson, vice-president, B. F. Goodrich Co., were elected vice-presidents. J. W. McLaughlin, vice-president, Union Carbide and Carbon Corp., was re-elected treasurer.

New directors elected for the term expiring May 31, 1955, are E. T. Asplundh, Columbia-Southern Chemical Corp.; Paul L. Davies, Food Machinery and Chemical Corp.; F. J. Emmerich, Allied Chemical & Dye Corp.; Mr. McLaughlin; Mr. Munson; Dan Rugg, Koppers Co., Inc.; and J. A. Sargent, Diamond Alkali Co.

Clarke Retires from FDA Post

James O. Clarke, chief of the Food and Drug Administration's division of program research in Washington, retired June 30 after 35 years of service, and has been succeeded by Robert S. Roe, chief of the Los Angeles district, according to Charles W. Crawford, Commissioner of Food and Drugs of the Federal Security Agency.

Mr. Clarke's career in the federal service began in 1917 in the Savannah station of the Bureau of Chemistry which later became the Food and Drug Administration. He was successively inspector and chemist, station chief, chief of the New York station, chief of the central district, and chief of the division from which he is retiring.

Conklin Recovering from Operation

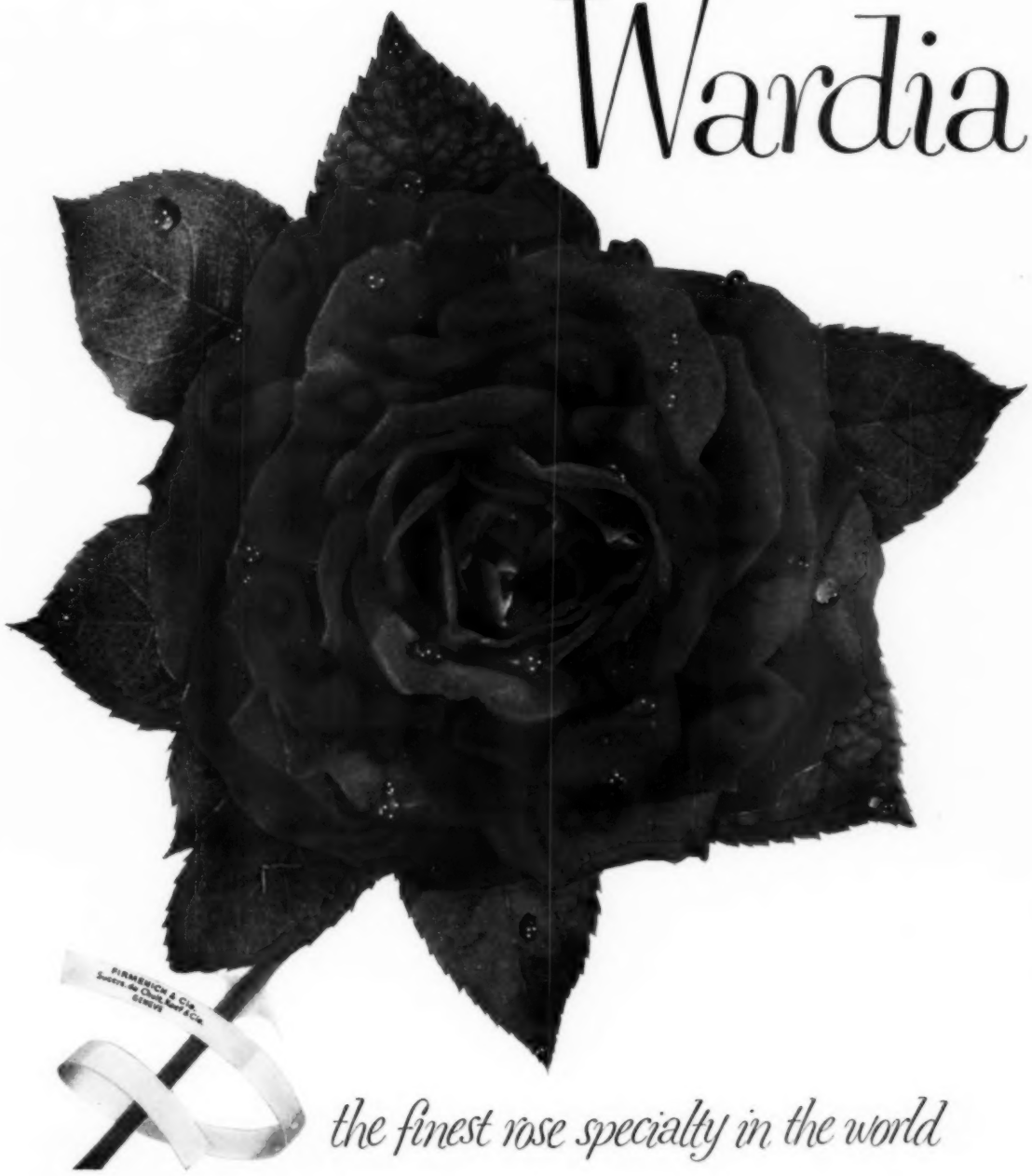
Walter A. Conklin, Wallace Paper Box Co., and past president of the Foragers of America, is now recuperating in his home at 27 Bayberry St., Bronxville, N. Y., following a serious operation last month.

Smith, Ass't V.P., Arner

Jeff Miller Smith has been elected assistant vice-president in charge of sales of the Arner Co., according to Dr. Niels C. Klendshoj, executive vice-president. Before he joined the company in 1950, he had been treasurer of B. L. Lemke & Co.

JEFF MILLER SMITH

Wardia



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Johnson with Smith-Dorsey

Victor T. Johnson has been elected vice-president of the Smith-Dorsey pharmaceutical division of the Wander Co. He had formerly been manager of the chemical division and assistant to the vice-president in charge of sales of Bristol Laboratories.

Reinhard, Warner Inst. Director

Dr. John Frederick Reinhard has been appointed director of pharmacologic research in the Warner Institute for Therapeutic Research. Before joining Warner-Hudnut he had been director of the pharmacology department of Nepera Chemical Co.

Heads Milwaukee Sales Mgrs. Ass'n

Dave Sutton, vice-president in charge of sales for Kremers-Urban Co., has been elected president of the Milwaukee Sales Managers' Association. During the recent conference of National Sales Executives in San Francisco which he attended, he was elected to the board of directors of that organization.

Merker's 45th Year, Parke, Davis

Dr. Harvey M. Merker, authority on chemical engineering and manufacture, last month observed his 45th anniversary with Parke, Davis & Co. He rose from the job of moving 100-gallon drums of glycerine to that of director of inventories and consultant to chemical and pharmaceutical manufacturer.

Wurzburg to Represent Plax

Wurzburg Brothers, Inc. has been appointed distributor of the Plaxpak bottle by Plax Corp., for Tennessee, Mississippi, Louisiana, Alabama and Arkansas.

CSC Dextran Plant Opens

Commercial Solvents Corp. is now operating the first commercial plant in the United States designed and built for the production of dextran, a blood plasma expander. The entire production, rated at over one million pints annually, is now being supplied to help meet military demands.

Warwick Lindsay Promoted by Ayer

John L. Warwick has been appointed headquarters sales supervisor of Harriet Hubbard Ayer, according to Nelson Millard, sales manager. He had formerly been sales representative for the company in Washington, D. C., Maryland and Virginia.

Chemists' Club Elections

William F. George was elected president of the Chemists' Club, New York, for the year 1952-1953 at the annual meeting last month. Additions officers elected were: Ira Vandewater, resident vice-president; R. J. Quinn, non-resident vice-president; F. W. Sullivan, suburban vice-president; L. E. Erlandson, treasurer; and Lloyd Van Doren, secretary.

Thomas B. Drew, S. H. Farkas, Foster D. Snell and Lincoln T. Work were elected as trustees for the three-year term expiring in 1955.

Dodge with Bertrand Freres

Douglas S. Dodge has joined Bertrand Freres, Inc., and will be associated with Hubert Schleinger, head of the American division. He has just returned from Grasse where he had the opportunity to work in several factories of the company in the Grasse region.

Ralphs Retires After 51 Years

Reginald C. Ralphs has retired from Burroughs Wellcome & Co. as vice-president in charge of Finance. He first joined the parent organization, the Wellcome Foundation Ltd., London, in 1901. He has been associated with the financial side of the company in England, Canada and, since 1920, in the United States where he held positions of secretary, treasurer and vice-president. He has also been a director since 1942.

Sterling Merges Watkins, Bayer

Sterling Drug, Inc. has merged the R. L. Watkins Co. with the Bayer Co. The combined business of these two Sterling divisions will be under the direction of Harvey M. Manss, vice-president of Sterling Drug Inc. in charge of the Bayer Co.

D. Herbert Williams, divisional vice-president of Watkins, has been appointed assistant to the president.

Emile Schlienger

Emile Schlienger, 78, president of Bertrand Freres Grasse, France, and Bertrand Freres Inc., New York, and one of the oldest friends associated with the Perfume trade in France, passed away on June 21. He had been with Bertrand Freres from 1895 until his death last month.

Except for the two war periods, Mr. Schlienger made annual visits to America travelling over the entire country, calling on friends and customers. He made his final trip in 1948.

A man respected for his knowledge of the American problems and acknowledged as one of the finer producers of Essential Oils, his loss will be felt very keenly in the industry. Bertrand Freres will continue in the capable hands of his three sons, with Hubert Schleinger heading the American division.

J. Clifton Buck

J. Clifton Buck, former vice-president and director of Smith, Kline & French Laboratories, died June 14 in his Atlantic City home at the age of 85. He had been associated with the company since 1901 as secretary, vice-president and director. He was the father of J. Mahlon Buck, president of Smith, Kline & French Inc.

Dr. Alfred Dohme

Dr. Alfred Robert Louis Dohme, former president—from 1911 to 1929—of Sharp & Dohme, Inc., died at his home in Baltimore on June 10 at the age of 85. He was a director of the company at the time of his death. He was born above the original Sharp & Dohme apothecary shop in Baltimore and was credited later with establishing the first scientific laboratory for the assay of medicinal drugs in the United States.

Philip E. Haebler

Philip E. Haebler, 54, vice-president of Goldschmidt Chemical Corp. and of Cerium Metals Corp., died June 7 while sailing on the Shrewsbury River near Rumson, N. J., where he had a summer home. He also had a home at 6 Belleclair Place, Montclair. He was a national champion iceboat racer and a leading amateur yachtsman, and had been president of both the Rumson Ice Yacht Club and the Eastern Ice Yachting Association.

Surviving are his wife, Mrs. Elsie R. Haebler; a son, William T. Haebler; his father, Theodore Haebler; and a brother, William T. Haebler.

Henry F. Kleinfeldt

Henry F. Kleinfeldt, vice-president of Abbe Engineering Co., died on June 6.

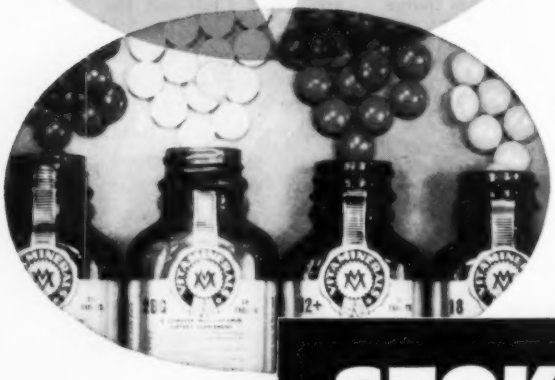
Carl K. Sharr

Carl K. Sharr, sales manager of Dr. Hess and Clark, Inc., died June 11 in the Samaritan Hospital, Ashland, Ohio, following a prolonged illness. He joined the organization as traffic manager in 1925, subsequently advancing to assistant sales manager, and later becoming sales manager in 1942. He was 51 years old.

Stokes keeps pace with growing industries

Battery of Stokes Model B-2 rotary tablet machines at the Vitaminerals, Inc., plant. Sixteen sets of punches and dies are used to produce 350 to 650 tablets per minute.

Examples of some of the many vitamin products manufactured at the modern Vitaminerals plant.



For the past fifty years thousands of pharmaceutical houses have relied on Stokes equipment to produce a wide variety of products. Today, Stokes equipment is standard in nearly every pharmaceutical plant throughout the world.

Vitaminerals, Inc., Glendale, California, manufacturer of vitamin products, is typical of many manufacturers who use Stokes rotary tablet machines, drying closets, mixers and granulators. Plans for expansion of plant facilities at Vitaminerals include specification for additional Stokes equipment because of the efficient and reliable service Stokes machines have rendered in the past.

Stokes tabletting presses produce tablets of accurate weight, uniform density and finest appearance. Production by the hundred or the million requires little attention or servicing, a feature of special importance to plants located at a distance from service facilities.

Assistance is offered to pharmaceutical manufacturers, without obligation, through Stokes Advisory Service and Stokes engineers in the field, on such problems as tablet formulae, punch and die design, and improved manufacturing and operating procedures.

Send for Catalog No. 800, "Stokes Tabletting Presses", which pictures and describes tabletting processes, and for Catalog No. 600, "Stokes Pharmaceutical Equipment", which describes the complete line of Stokes pharmaceutical machinery now available.

STOKES

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Plastics Molding Presses,
Industrial Tabletting
and Powder Metal Presses,
Pharmaceutical Equipment,
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Management Forum

by Francis Chilson

INDUSTRIAL CONSULTANT

Multi-Story Again

A friend asked me the other day why it is that many firms still build multi-story plants if single-story plants are so much more economical. Well, there's one basic answer and we may as well face it: the drug and cosmetic industry as a whole is inherently so profitable that enterprisers in it don't really give a fiddler's damn about production and traffic costs. When you see many published financial statements showing from ten to more than twenty percent in net earnings after taxes you can readily appreciate that production costs comprise but a small part of total outgo. I know of several firms in which production cost becomes something to worry about only when the cost of sales—labor, factory overhead and all materials—rises above 20 per cent of the net sales dollar.

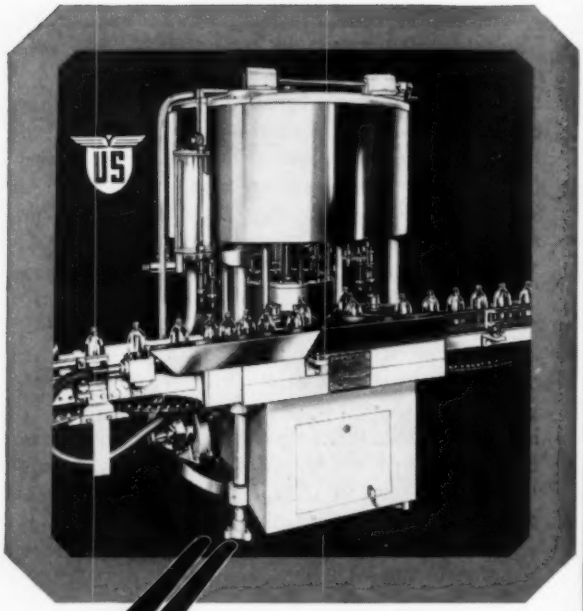
The high brass in this industry is concerned with marketing costs primarily. Sell the goods is their single slogan. And they are right. There is no good in having an efficient plant if your stuff isn't selling. The success of the industry proves that marketing thinking in high places is pretty sound. I know that the discovery of antibiotics, the war, the phenomenal increase in population and many other economic circumstances may be credited for much of the marketing success our trade is enjoying but nevertheless the men running the marketing end of the business knew how to capitalize opportunities as they came along. And that's what counts; they get the dough.

I know that many big shots waste a lot of time raising hell about production costs but this simply means that at the moment they haven't anything else to do. Of course it may mean sometimes that Mr. Bigbrow has discovered something wrong with the marketing program and is looking for a scape-goat. The goat always is the plant manager. He didn't produce enough stuff, or, he produced too much. His shipments weren't on time or his costs were too high. Someday I'll find a marketing guy blaming himself for failure to meet a scheduled quota but the shock will be too great for me and I'll drop dead.

I've known Mr. Bigbrow, after giving a lot of lip service to economy in plant operations even to the extent of issuing warning memoranda about the waste involved in burning a few electric lights when there was no need for them, to sanction a new building program involving the construction of the wrong type of building in the wrong place—in one case a four-story job a mile from a railroad siding—thus placing a floor under fixed overhead charges and wasting thousands of dollars annually.

Now if Mr. Bigbrow were undertaking a marketing program involving the expenditure of a million or more dollars, you can bet your life he'd be in there probing with a sharp pencil and he'd have the best outside counsel he could get to make sure no boners were pulled. Marketing is his primary interest and he can sense pretty shrewdly when certain types of expenditure will pay out.

This brings me to another consideration which often is unknown or overlooked in concerns large enough to have their own engineering departments. And that is the difference between routine engineering and creative engineering. The creation of a new plant is creative engineering, invariably beyond the experience and capabilities of any inside engineering group. There are factors of policy, trade economics and trade experience that should be carefully weighed before a new plant program is launched. It is unreasonable to expect that any inside engineering group could base their recommendations on any such broad measurements. The creative engineer must always be free of company politics and company discipline; he should be as free to make recommendations as an outside advertising agent would be or an outside lawyer. And he shouldn't have to worry about whose toes he's treading on or whose pet theories he is knocking down. He doesn't have to worry about the effect of his actions upon his future with the company. The outside engineer always is objective; the inside man always subjective.



Most widely used Automatic Filler

The U. S. Rotary Vacuum Filler is completely automatic. Basic engineering features are built into 6 machine models with 14 different adaptations to economically provide custom built refinements for handling any type of liquid, any type or size container at required production line speeds. Easily adjustable for container changes. New, advanced automatic container feed; automatic safeguards. New exclusive drive control provides remarkably smooth starting and stopping through push button control.

For details, write for new "Rotary Filler Bulletin"

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A well planned Selectrol installation showing one of four units in operation checkweighing small consumer packages.

Sales & Service from Coast to Coast

Packaging takes a pretty stiff bite out of total production costs. This is why substantial capital expenditures are going into 1952 modernization. Equipment-wise top management attending the National Packaging Exposition in Atlantic City were seeking answers to (1) reduced operating costs (2) increased plant output (3) reduced physical labor (4) smaller losses per unit package (5) speed and improved packaging (6) assured reliable operation. EXACT WEIGHT Scales, individually or with allied and coordinated equipment meet this challenge squarely. One group of models the "Selectrol," electronically controlled and illustrated above, delivers 100% product check at high speed. Many other models, semi-automatic in type, accomplish like results with minimum human effort. Hundreds of models are available for packaging tasks that by virtue of their nature require manual application. Of one thing you can be sure. If it's EXACT WEIGHT Scale equipped it meets the challenge for saving time, money, product and labor. Write for details to fit your operation.

EXACT WEIGHT SCALES

Industrial Precision

THE EXACT WEIGHT SCALE COMPANY

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Now, I could easily write a book about the blunders that have been made in this trade by many of the biggest firms in it when they undertook new plant programs without qualified, independent outside counsel, other than that which architects and builders are capable of giving and that is very little since it must be limited to structural features. Neither an architect nor a builder can tell whether you should have a one or a ten story building and they don't give a damn They can and will build anything you ask for.

Recently I saw an installation involving slugging, milling, sifting, mixing and conveying. The material was prepared in one building and the granules elevated and dumped on a stainless steel belt conveyor, which conveyed the material through a bridge into the next building where the material fell through chutes into handling cans. The installation looks imposing and from an engineering standpoint it works. The material finally does reach its destination. The bridge and the stainless steel belt conveyor could have been eliminated and the whole job done with a mass flow conveyor. Not only that but the mass flow conveyors could have been arranged to feed the tablet presses uniformly thus eliminating handfeeding and can handling. The use of the mass flow conveyor would have saved about $75,000 in construction and unnecessary equipment costs.

The fact that this installation is much better than its predecessor doesn't justify it at all. But this is the typical subjective attitude. A new installation is justified because it can be shown to save money over the old one. Comparison with the past is always bad when used as the sole deciding factor. A new installation can be much better than its predecessors and still be almost completely wrong. You can kill a fly with a cannon and you can also kill him with a fly swatter. The fact that a thing works mechanically doesn't prove it is right. The old law saw that the man who attempts to be his own lawyer has a fool for a client applies as well to creative engineering.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

New Automatic Hopper

Owing to the large variety and shapes of screw caps on the market, both molded and metallic, the cap feeding hopper of the "TITE-CAP" FULLY AUTOMATIC SCREW CAPPER has been re-designed to enable it to handle all caps without the necessity of making adjustments or changes.

The new hopper is equipped with a revolving drum which keeps the caps in gentle motion and thus prevents them from sticking together. Discharge of the caps is via a chute at the bottom of the hopper as compared with top discharge formerly used.

To facilitate emptying the hopper at the end of a run it has been equipped with a side opening door held in place by one nut only. A sight glass located on this door permits inspection of the contents so that the attendant can see at a glance whether it is necessary to replenish the supply of caps.

Should jamming of the hopper occur for any cause whatsoever a clutch located on the drive shaft goes into immediate action and disengages the drive thus preventing any possible injury to the parts or breakage of molded caps.

Chucks for tightening the caps have also been redesigned to enable them to handle the many varieties of caps. Special chuck liners are furnished for this purpose so it is not necessary to purchase completely new chucks. Small plastic caps for shaker type bottles are handled as easily as large metal caps for pickle jars. All chucks are equipped with an adjustable tension device, easily regulated, for controlling the tightness of the caps to suit individual requirements.

Speed of this single head automatic screw capping machine is up to 60 containers per minute.

The manufacturer is TITE-CAP MACHINE CO. INC., 62A ROSE ST., NEW YORK CITY 38, N. Y.

Chromalox

Many drying, baking, degreasing, curing, preheating, and similar jobs have been speeded-up by the comparatively new far-infrared radiant heaters. This rather different heat source radiates its energy in the almost invisible "far-infrared" portion of the spectrum. This difference in wave length explains many of the advantages being found in its use.

The "far-infrared" radiation is even absorbed by glass, for example, and is not transmitted by it. This advantage has been put to use in heating television tubes and bottles, drying mirrors, heating transparent plastics, drying ink on cellophane, etc.

The older and more familiar infrared bulbs produced their energy in the "near infrared" wave length—which is "near" to the visible portion of the spectrum. Near-infrared is transmitted by glass, and is almost wholly reflected by white materials. The "far-infrared" rays, being of longer wave length, emanate in a focussed pattern from a comparatively low temperature heat source. These longer rays are absorbed almost equally by all colors and materials, from white to black. This is quite in contrast to the sun's near-infrared radiant energy, which is reflected by a white shirt or suit.

Laundries and printing plants also use far-infrared to heat white materials quickly. Electric far-infrared radiant heaters between the rolls of laundry presses speed drying processes and increase output. One laundry stepped up production 28 per cent. Since the radiant output of these heaters can be varied from 0 per cent to 100 per cent of its full capacity as effortlessly as the volume of a radio is tuned, the laundry can reduce the radiation by a fine amount on dry days, and can accurately step it up on damp days.

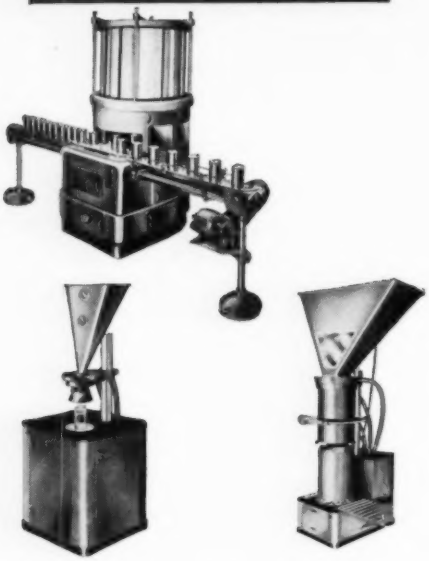
Other new uses are the curing of plastic laminates, fusing vinyl films, drying fabrics and other materials,

CLEAR THE AIR

with

VACUFLOW

Dustless POWDER FILLERS



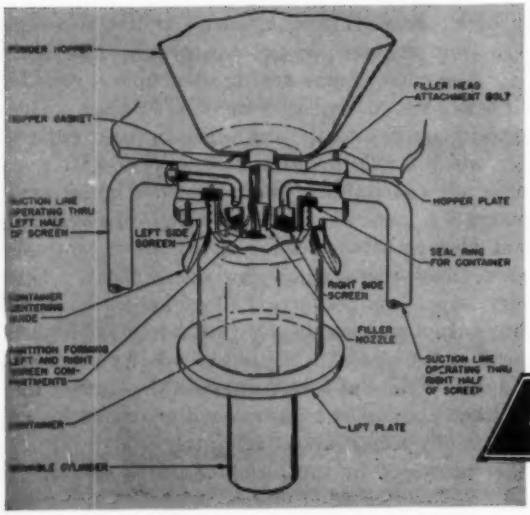
Cut Product Wastage
Obtain Accurate Uniform Fill
Cut Cleaning Costs

Pneumatic, a leading manufacturer in the packaging field since 1895, now offers a complete line of powder filling equipment — machines operating on a new principle of vacuum feeding, instead of pressure to pack the powder into its container.

Here's how Vacuflow works: Air is removed from the container to create a vacuum, which draws a measured quantity of powder from the hopper. Uniform fill is assured by regulating the powder's density with a predetermined degree of vacuum. This unique method eliminates dust because it simply does not involve air currents that *cause* dust.

Units are available to handle every powder filling requirement. This includes semi-automatic models for filling containers ranging from a tiny powder box up to 200 pound drums and multiple head rotary models for automatic handling of 5 pound sizes or less, at speeds of 45 to 300 per minute. Pneumatic invites your inquiry.

PNEUMATIC SCALE CORP., LTD., 70 Newport Avenue, Quincy 71, Massachusetts. Branch Offices in New York; Chicago; San Francisco; Los Angeles; Seattle.



PNEUMATIC
LOWER COST PER CONTAINER

PACKAGING AND BOTTLING MACHINERY

curing foundry resin shell molds, skin drying of foundry molds, welding preheating to prevent locked-in stresses, and degreasing. Many new installations are conveyorized, since the radiant heaters are simply installed over the widest conveyors and direct their intense and very uniform heat on to the work.

Many other advantages are found in the rugged all-metal construction, their long life, the variable intense or gentle heat, the focussed radiation and an additional safeguard whenever volatiles are present.

For more information about Chromalox electric radiant heaters write Edwin L. Wiegand Company, 7590 Thomas Blvd., Pgh. 8, Pa.

Stokes & Smith New E G Universal Filler

Combining simplicity of construction with a functional beauty of sterile quality, this most advanced E G Universal Filler, designed and manufactured by Stokes & Smith Company, Philadelphia, Pa., features mechanical parts located above filling station. This arrangement is more efficient, because it helps to keep all parts free from dust and dirt, makes machine look neater, and helps reduce cleaning maintenance.

It's adaptable for rotary and in-line conveyor filling, and its adjustable table permits it to fill by pack, weight or volume using a minimum number of augers. Auger speed is adjustable from 500 to 1000 rpm. The E G Filler can be pretimed to pace the operator for more efficient production. It also features a convenient, simplified control panel for finger-tip changeover. Fine and coarse products may be filled more accurately through a micrometer adjustment. For complete details, write Stokes & Smith Co., Frankford, Philadelphia 24, Pa.

New Lightnin Mixer Catalog

A new catalog, describing turbine-type Lightnin Mixers for open and closed tanks, and containing a factual discussion of fluid agitation, has just been released by the manufacturers, Mixing Equipment Co., Inc., Rochester, N. Y.

In 32 illustrated pages, the new Lightnin Mixer catalog explains how guaranteed fluid agitation results may be obtained for any process. It shows how to anticipate process changes by installing a mixer with interchangeable speeds. It describes how a standard-design mixer can be adapted to give the versatility of a custom-design unit.

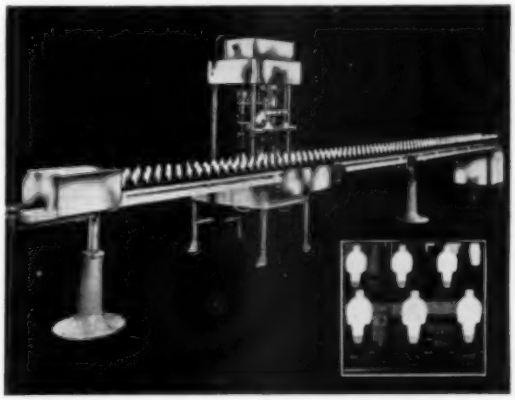
The new catalog also describes how mixing impellers are scientifically selected and sized for specific jobs; and how research is used to develop accurate prediction of fluid agitation results.

It fully describes the new line of Lightnin Series "E" Mixers, available in sizes from 1 to 500 horsepower, offering up to 16 standard AGMA speeds from one basic gear reducer drive.

Request Catalog B-102. Address requests to Mixing Equipment Co., Inc., 200 Mt. Read Boulevard, Rochester 11, N. Y.

Odd Shaped Containers Filled at High Speeds

A leading manufacturer of spray deodorants, using a small Polyethelene container, now fills up to 175 containers per minute on a new high speed rotary filler designed and built by MRM Company, Inc., 191 Berry Street, Brooklyn, New York. Recognizing the problem



of filling odd shaped containers that cannot be carried on a conveyor, MRM developed a special conveyor and rotary filler to lick this fault.

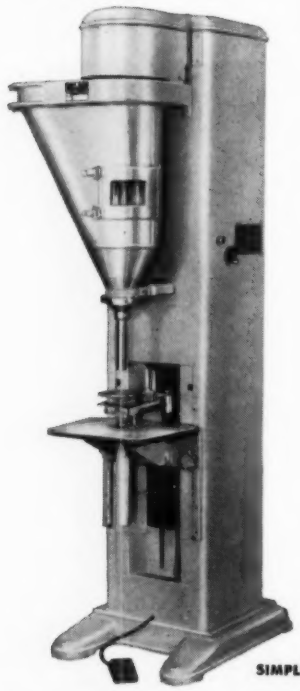
The conveyor is equipped with specially designed adaptors spaced over the entire length of the conveyor which firmly holds the container in place while filling. All other operations such as capping, insertion of plugs, and code dating are accomplished on this same conveyor. Since all containers are perfectly spaced and synchronized, the extra operations as mentioned are done automatically. Operators simply drop the containers into the adaptors on the intake line and remove them after all operations are completed, at the end of the discharge side of the conveyor.

The fully automatic 12 spout rotary filler shown in the illustration is a gravity type but it could be a vacuum filler if required. However, special filling nozzles were designed incorporating a centering device that firmly grips the container prior to filling. This assures exacting accuracy of fill. An integral supply tank and float control is supplied with the machine. The driving mechanism is totally enclosed in a stain-less steel cabinet, in the front of the machine, mounted above the floor to prevent dirt and forcing matter accumulation. The careful consideration for simplicity of design for both the filler and conveyor provides for quick cleaning and sterilization as well as a minimum of maintenance. No skilled help is required to operate or maintain the machine.

According to Mr. Herman Manas, president of MRM Company, Inc., this new machine will permit manufacturers to maintain mass production schedules filling odd shaped containers of glass, tin or plastic, which formerly could not be done on existing automatic fillers. Mr. Manas stated that he will supply fillers with speeds up to 350 per minute and in any length conveyor, depending on the number of operations required after filling.

S&S Presents—

the new "EG" FILLING MACHINE



This most advanced "EG" Universal Filler, designed and manufactured by Stokes and Smith Company, Philadelphia, Pa., features mechanical parts located above the filling station, and includes many innovations in design, amplifying all of the versatility of the well-known S & S G-1 Universal Filling Machines.

For use by volumetric filling—packing against pressure—or with combination auger and vacuum—or gross weighing.

- *Parts located above filling station.* Keeps parts clean from dust and dirt; helps reduce cleaning maintenance, makes machine look neater.
- *40% less working parts.* Totally enclosed planetary gears run constantly in oil, exceptionally quiet in operation. There are no cams or sprockets. Magnetic clutch is self-adjusting.
- *Finger-tip changeover.* Simplified electric control panel is conveniently located near operator.
- *Auger speed is adjustable from 500 to 1000 RPM.*
- *Micrometer adjustment for speed and accuracy.*
- *Pre-timed for greater efficiency.* Filling cycle can be timed to pace operator for more efficient production.
- *Adjustable table*—the same augers can be used with varying heights of containers.
- *Adaptable single and multiple stations for automatic conveyor filling.*
- *Compact size.* 24" wide, 31" long, 77" high.

fmc

FOOD MACHINERY AND CHEMICAL CORP

STOKES & SMITH Co

4912 Summerdale Avenue
Philadelphia 24, Pa.

Pacific Coast
SIMPLEX PACKAGING MACHINERY, INC.
Oakland, California

HELENA RUBENSTEIN | COLGATE PALMOLIVE | ELIZABETH ARDEN

PERL MACHINES *are known by the company they keep!*

NOPCO CHEMICAL | NOVOCOL CHEMICAL | HOFFMAN-LaROCHE

MERCK &

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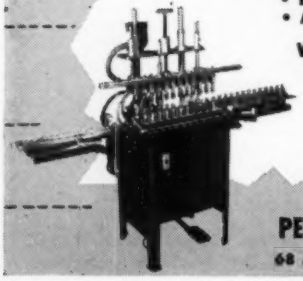
JOHNSON

More and more of the nation's leading drug and cosmetic producers have turned to PERL bottle, tube and jar filling machines for the speed and accuracy their fine products demand. Whatever your filling requirements, PERL can make the machine that will do the job best.

A COMPLETE LINE OF MACHINES

- Bottle Filling
- Can Filling
- For Gravity, Vacuum or Pressure
- Jar and Tube Filling and Closing
- Bottle Cleaning
- Ampoule Filling

Write today for Catalog D-3



PERL

PERL MACHINE MFG. CO.
68 JAY STREET BROOKLYN 1, N. Y.

Filling

TUBES, BOTTLES, JARS, *and* CANS

FASTER...EASIER

Here is a versatile, quality-built machine...engineered to the highest sanitary standards . . . that has many uses in both large and small plants. Dispensing capacity adjustable up to one pint per stroke. Handles liquids, semi-liquids, creams, pastes and greases. Nozzles available for filling practically all types of containers . . . jars, bottles, cans or tubes. The machine is fast, easy to operate, sanitary, and easy to clean. Write today for complete details and reasonable prices.

ROCKFORD Anderson BROS. MFG. CO. ILLINOIS

Ask for Bulletin No. 7-24

ANDERSON BROS. MFG. CO., ROCKFORD, ILL.

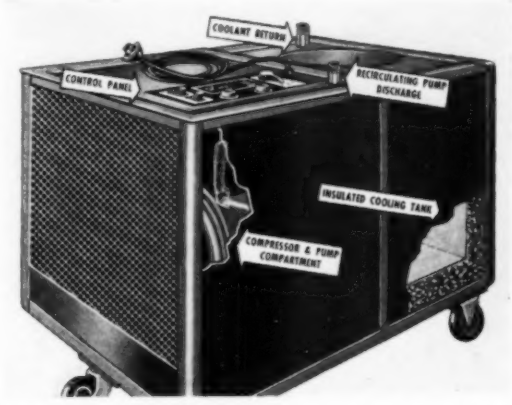
Bin-Dicator Catalogue

George A. Schemm, president, The Bin-Dicator Company, 13946-170 Kercheval, Detroit 15, Michigan, announces that the company has just published a new 1952 catalog describing and illustrating the company's products. Bin-Dicator Company markets a complete line of bin level indicators which are widely used throughout industry to indicate the level of granular and pulverized materials stored in tanks, silos, hoppers and bins. These units also actuate various types of signals, if required, and can be used to start and stop loading and filling machinery, as required by the level of content in the storage unit. The new catalog supplies complete installation data for the various types of units; for thin or thick walled bins, for inside or outside location, and for suspended interior installation. Bin-Dicators are available equipped with Mercury Switch, with sensitive Micro Switch for light materials, or with explosion-proof Micro Switch for use in hazardous locations. Numerous wiring diagrams are included making the book a useful reference manual for installation and maintenance crews. The catalog also describes a companion product, the Bin-Flo Aerator Unit, which is used to introduce low-pressure air into dry, finely ground materials which tend to pack and bridge, and thus restore their fluid characteristics.

The "Junior" Chil-er

Mayer Refrigerating Engineers of Rutherford, New Jersey announces the development of a new, complete, industrial refrigerating system that provides maximum portability with thermostatic temperature over a wide range of operation.

The unit, designed for automatic recirculation of cold water, brine and other liquid coolants, is also available



with a heating element for the recirculation of hot water.

The system consists of an air cooled condenser, condenser motor, recirculating pump, pump motor, insulated recirculating liquid storage tank, thermostatic temperature regulator, starting switches and electric power cord; all enclosed in an attractive hammer-tone metal housing mounted on rubber tired wheels. It requires no outside water connections—no installation.

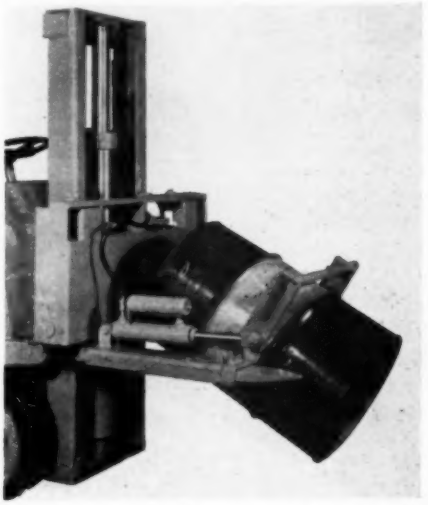
The Junior Chil-er is available in seven models in capacities from ¼ HP to 3 HP with pump capacities from 1 to 10 G.P.M. The largest unit is designed to clear through standard width doors.

The standard temperature range with water is from 38°F to 60°F; with brine, from −10°F to +38°F; with the heating element, from 60°F to 140°F.

The Junior Chil-er meets the need for a low cost, portable unit in the small capacity range for process cooling, laboratory experiments, machine operation and other diversified industrial requirements. It supplements the standard chil-er line with capacities from 3 to 150 tons. MAYER REFRIGERATING ENGINEERS, Rutherford, New Jersey.

Hydraulic Drum Up-Ender

An economical hydraulic drum up-ender attachment which permits fork truck operators to pick up, transport, stack and empty heavy drums *without leaving their seat*, has been developed by Baker-Raulang, 1250



W. 80th, Cleveland, O. Drums can be rotated 90 degrees for vertical or horizontal stacking, or tilted 45 degrees *below* horizontal for emptying at any height within the lift range of the truck.

The up-ender adds a *rotating* "fifth purpose" to Baker's 4-purpose carriage which already provides standard forks, fork-spacer, an automatic adjusting clamp and side-shifter in one unit. De-mounting the unit is simple—remove two lock pins, unsnap one quick-detachable hydraulic hose coupling, and slide the up-ender off the forks.

The attachment consists of shoes which are "pinned" to the forks of the Baker 4-purpose carriage. Mounted on the shoes are pivoted rubber-faced grab plates which clamp around the drum and hold it firm. The up-ending operation is accomplished thru a hydraulic cylinder mounted on one of the shoes. Operation of the hydraulic cylinder mounted on one of the shoes. Operation of the hydraulic cylinder builds up pressure in an actuating accumulator mounted above it, which is used to return the drum to an upright position.

LABELING *Without Glue!*

up to 150/m
and
NO CHANGE PARTS

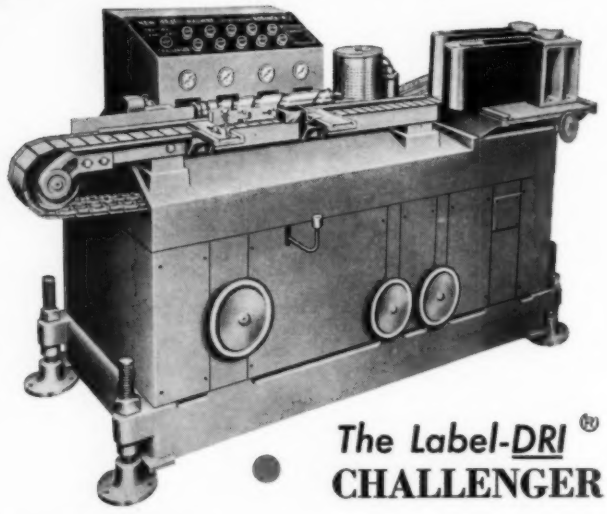
Get a full
8-HOURS of
production
EVERY DAY!

No downtime
for glue preparation,
maintenance,
and daily clean-up . . .

2-INCH DIAMETER

2½-INCH DIAMETER

3-INCH DIAMETER



You pay no more for this sustained performance than for ordinary high-speed labeling machines—*and*, because *you use no glue*, you totally eliminate frequent stoppage. The CHALLENGER is ALL production time!

The adhesive is right on your label, activated by heat as the label is applied. This is *modern*, carefree, foolproof, *Push-Button* Labeling!

912 ***Be sure to write for details —***

The Label-DRI ® **CHALLENGER**

NEW JERSEY MACHINE *Corporation*

AUTOMATIC LABELING • PACKAGING — PAPER BOX MACHINERY • MAKERS OF THE PONY LABELRITE

FACTORY SALES AND SERVICE BRANCHES
325 W. HURON ST., CHICAGO 10, ILL.
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2500 W. 6TH ST., LOS ANGELES 5, CAL.

MAIN OFFICE & FACTORY: 1550 WILLOW AVENUE, HOBOKEN, N. J.

In addition to the quick-demounting feature, an important advantage is that the operator maintains complete control from his seat. Clamp and tilt controls are dash-mounted at his left for convenience.

Both the 4-purpose carriage and the hydraulic up-ender can be mounted on 2000, 3000 and 4000 lb. Baker fork trucks.

BAKER HYDRAULIC DRUM UP-ENDER
for 2000, 3000 and 4000 pound fork trucks
Specifications

Weight	100-120 lbs.
Rotation	135° from vertical
Clamping pressure	1000 lbs. maximum
Capacity	Safely handles any cylindrical objects such as steel drums, steel or wooden barrels, cardboard drums, etc., up to (1) 25½" diameters on the 42" carriage. (2) 31½" diameters on the 48" carriage.

Mono-Bed Demineralizer

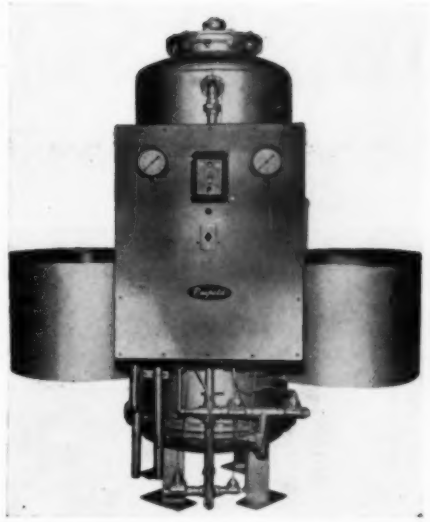
The Penfield Manufacturing Company of Meriden, Connecticut, has announced the addition to its demineralizing equipment line of a new fully automatic Mono-Bed Unit.

This new Penfield Demineralizer (see above picture) performs all its operating functions, including the regeneration cycle, completely automatically. There are no valves to operate and no supervision is required. Whenever the effluent's conductivity falls below standard, the treated water is automatically discharged and lights (or other warning system) signal the need for activation of a regeneration cycle.

The simple turning of a single switch then puts the unit through its regeneration cycle completely automatically, including rinsing and recutting in the effluent when desired resistivity (purity) is reached. During this automatic regeneration cycle, the regenerative tanks are automatically refilled with water so that fresh acid and caustics may be added in preparation for the next regeneration cycle.

This new Penfield Mono-Bed Demineralizer, in addition to employing the most effective ion exchange technique available to industry (cation and exceptionally strong anion resins intimately mixed in a single unit tank through which the raw water passes only once), also provides the advantages of completely automatic operation. Costly and time-consuming errors that occur in the manual operation of regeneration cycles are avoided, desired high purity of the effluent is an automatic certainty, and operating costs are cut to a minimum.

Available in flow rates from a few gallons per hour to 5,000 gallons per hour and up, the new Penfield fully automatic Mono-Bed Demineralizer requires no steam power, operates for a chemical cost of only pennies per



1,000 gallons of treated water, and provides an effluent with a mineral content of virtually zero (resistances have been reported as high as 20,000,000 ohms per centimeter).

Complete catalog information on Penfield's full line of Mono-Bed and Multi-Bed Demineralizing equipment, including the above-described new fully automatic unit, may be secured by writing Mr. Edward H. Clohessy, General Manager, Penfield Manufacturing Co., Inc., 19 High School Avenue, Meriden, Conn.

Howe Scale Catalog

A new twenty-eight page Condensed Scale Catalog Number 11 has just been released by The Howe Scale Company, Rutland, Vermont.

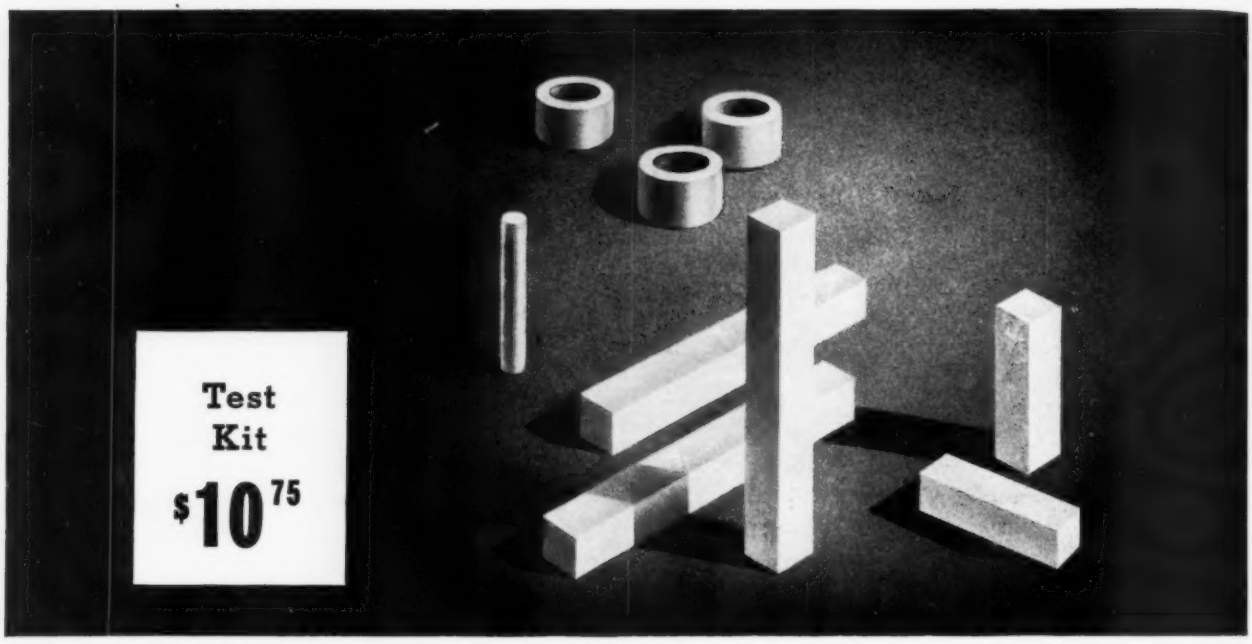
Mr. Richard F. Straw, Vice President in Charge of Sales, stated that it is a handy reference featuring the most complete line of modern scales for every industrial need. It includes a selection of a thousand popular standard Howe scales weighing from 1/64th of-an-ounce to400 tons.

A compact edition of Howe's complete catalog of 200 pages, the new Condensed Scale Catalog includes complete specifications, spot illustrations, and essential information. A simple index makes it easy to find any scale. The Condensed Scale Catalog is conveniently arranged by types of weight indication as Howe is the only company in the industry to offer a complete selection for every weighing requirement. Featured are the famous Howe Scales with Beam indication, the exclusive Tape-Drive Dial, unique Weightograph projection, and the revolutionary Teleprint Electronic Remote Weight Recorder.

The Condensed Scale Catalog also shows a page of Howe Hand Trucks, and a listing of its Branches with sales and service departments throughout the country.

For further information, write for a free copy of Condensed Scale Catalog No. 11, The Howe Scale Company, Rutland, Vermont.

Now, TEST NEW CARBOLOY *for corrosion,*



FOR METALLURGISTS! ENGINEERS! PRODUCT DESIGNERS! Lab-test kit of new Grade 608 Carboloy Chrome Carbide. Includes: three bars ¼" square x 2"; two bars ¼" square x 1"; three bushings 5/16" long, ½" O.D., 5/16" I.D.; one rod ⅛" diameter x 1" long. (Bulletin WR-104 included.) Samples adequate for wide range of metallurgical and chemical tests. Additional information relative to your application free, on request, from Carboloy engineers. Order kit for your preliminary testing today. Check new Grade 608 Chrome Carbide against your requirements *now*. See properties and test results below.

Properties and test results of Grade 608

THE OUTSTANDING properties of Grade 608 Cemented Chrome Carbide promise to open new cost-saving applications throughout industry. You may wish to expedite your initial test appraisals by starting with the above test kit now, pending larger quantities or supplies as production facilities expand.

Physical Properties
(Grade 608)

Composition: 83% $CR_3 C_2$
2% WC
15% Ni

Hardness (Nominal): 88 Rockwell "A"

Density (Nominal): 7.0 gms/cm³ (Slightly lighter than S.A.E. 1095 steel)

Transverse Rupture Strength: 100,000 P.S.I.

Coefficient of Thermal Expansion: 6.4 in range of 70° —1292°F.

Relative Abrasive Resistance: Dry Al Oxide—58.0

Test Results

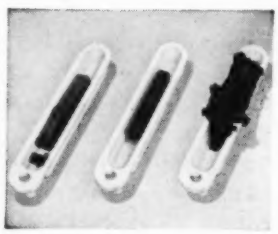
Salt spray. After subjection to a 30% salt spray for 750 hours, Grade 608 still retained its metallic lustre.

Sulphuric acid. With sulphuric acid as the corrosive agent, Grade 608 showed about 30 times the resistance of 18-8 stainless steel, and 3 times the resistance of tungsten carbides.

Nitric acid. Using nitric acid, the resistance to corrosion was approximately 8 times that of other carbides and twice that of stainless steel.

Steam erosion. Tests indicate a resistance to steam erosion approximately 60 times that of conventional carbides.

Lactic or citric acid. Grade 608 was practically inert under all conditions when exposed to lactic or citric acid.



OXIDATION RESISTANCE. (Left to right.) Samples of 18-8 stainless steel, Grade 608 Chrome Carbide and tungsten carbide after exposure in air at 1850°F. for 24 hours. All were originally identical in shape and size. Grade 608 Chrome Carbide appears to be virtually completely resistant to oxidation at all temperatures up to 1000°C. (1832°F.). Samples subjected to 1850°F. were only slightly discolored.

CEMENTED CHROME CARBIDE *abrasion, erosion*

New Grade 608 Carboloy Cemented Chrome Carbide, first of the new Series 600 Chrome Carbides, with chromium as principal ingredient, gives high resistance to corrosion or erosion, combined with good abrasion resistance. Opens new areas for carbide benefits, new product design. First sample test quantities now available; production quantities soon. For properties, sample kit, suggested uses of this great new Carboloy created-metal, see below.

Now available for your product designers, process engineers and metallurgists . . . sample test quantities of Carboloy Grade 608 Cemented Chrome Carbide, first in an entirely new series of metallic carbides.

Series 600 Chrome Carbides contain chromium as the principal ingredient. They are cobalt-free and practically tungsten-free. They feature high resistance to corrosion or erosion, combined with good abrasion resistance.

Field tests already point up exciting new areas where Series 600 will bring new cuts in costs, new highs in performance. Undoubtedly, *your* field, *your* product may benefit, too. Use sample kit to start your preliminary metallurgical and chemical tests of Grade 608 today.

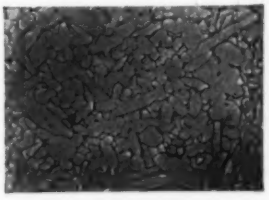
An expansion of carbides

Series 600 Chrome Carbides are light in weight, completely nonmagnetic and have a coefficient of thermal expansion about the same as that of steel. They are as machineable and as hard as tungsten carbides. They are stable and strong.

Fabricating and finishing techniques are the same as tungsten carbides. A flash plating of nickel makes Chrome Carbide blanks (as sintered or as ground) readily brazable with conventional brazing materials.

Series 600 may overlap a few tungsten carbide applications. But because of their unusual wear-proofing properties, their wear- and corrosion-resistance, look to Chrome Carbides for famous carbide benefits in many new areas of industrial and product applications. Here may be new opportunities for you, starting with Grade 608.

GAGE ANVILS currently being made of Grade 608 Chrome Carbide. In gage blocks, ring gages, plug gages and gage anvils, Chrome Carbide has already shown an outstanding ability to resist corrosion and abrasion. Since its coefficient of thermal expansion is about the same as that of steel, readings are not affected by temperature variations.



MICROSTRUCTURE of Carboloy Grade 608 Chrome Carbide shows appearance unlike any other metal. Note, particularly, the uniformity and interlocking character of the grain structure. Chrome Carbide is lighter in weight than tungsten carbide; facilitates handling and use of solid carbide. It will pay to start your laboratory tests on Chrome Carbides now.

WHERE CAN YOU USE GRADE 608 CHROME CARBIDE?

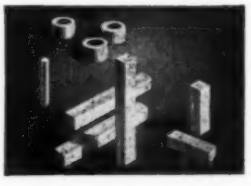
Field tests indicate new Series 600 Chrome Carbides offer unusually high resistance to corrosion or erosion combined with good abrasion resistance. For example, the following applications are suggested for Grade 608. Where else can you use Grade 608 Chrome Carbide?

- **Sheer blades for molten glass**
- **Core pins for baking ceramic parts**
- **Fishing rod guides**
- **Centrifuge nozzles, separating equipment**
- **Bearings where corrosives are present**
- **Textile guides**
- **Nozzles and valves: soaps, fats, oils, foods, chemicals, petroleum products, pharmaceuticals, fruit juices**
- **Valve and core pins, die casting**
- **Punches for movie film**
- **For many applications where stainless steel is not sufficiently abrasion-resistant**

CARBOLOY
DEPARTMENT OF GENERAL ELECTRIC COMPANY
Detroit 32, Michigan

"Carboloy" is the trademark for the products of Carboloy Department of General Electric Company

Use Coupon *to order sample kit today*



CARBOLOY Department of General Electric Company
11161 East 8 Mile Road, Detroit 32, Michigan

Please send ( ) sample test kits of Grade 608 Carboloy Cemented Chrome Carbide at special price of $10.75 each. (Technical Bulletin included.)

Enclosed is ☐ Check ☐ Money Order ☐ Purchase Order for $_____

☐ Please invoice us.

☐ Please send Technical Bulletin WR-104 only.

Send to_____ Title_____

Name of Company_____

Address_____ City & Zone_____ State_____

a superior bulk laxative
made with

Methocel

inert . . . uniform . . . effective

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Industry's Books

The Essential Oils, by Ernest Guenther, Ph.D., Vice President and Technical Director Fritzsche Brothers, Inc., New York, Vol. Six, 481 pp., Illus., D. Van Nostrand Co., Inc., New York, $9.75.

The present volume—the sixth—completes this series on "The Essential Oils." Like the third, fourth, and fifth, it is composed of monographs describing individual oils. Many of these will be of particular interest to the pharmaceutical, flavor and perfume industries: wintergreen, sweet birch, valerian, mustard, onion, hops, wormseed, juniper, labdanum and oak moss—to name only a few. A large section of the volume is devoted to the pine oils, so valuable to manufacturers of soaps, disinfectants, sprays, bath and other scented technical preparations. An authoritative and detailed chapter, by Dr. Leo Goldblatt, deals with the turpentine and related oils of the American Naval Stores Industries. A classification of all the essential oils described in Volume III, IV, V, and VI, arranged according to a modern taxonomic system, skillfully conceived by Dr. Theodor Philipp Haas, is presented at the close of this sixth volume. Each volume contains a detailed index. A complete, all-inclusive index, covering the contents of all volumes, will be found at the end of the sixth volume. The completion of "The Essential Oils" has required more than twenty years of field investigations throughout the oil-producing regions of the world, and ten years of literature research, editing and writing. It is not likely that any work comparable in scope to this undertaking will soon appear. Great credit should be extended by the entire essential oil industry to the author, to Fritzsche Brothers, Inc., and to those collaborators and correspondents who have aided in bringing this work into being.

Bacitracin, published by the Research Division, S. B. Penick & Co., New York, 127 pp., Cloth, $4.00.

This is a review and digest of the literature on bacitracin up to and including January, 1952. The purpose of the book is to make available for use a review of the data which have accumulated on the clinical usefulness of bacitracin and to direct attention to the wide potential of this drug based upon its known synergistic action with other antibiotics. The last chapter, entitled Summary—Bacitracin on the Antibiotic Horizon, gives an interesting resume of the properties of bacitracin.

Modern Drug Encyclopedia and Therapeutic Index, Edited by Marion E. Howard, M.D., F.A.C.P., Fifth Ed., 1431 pp., Drug Publications, Inc., New York, $15.

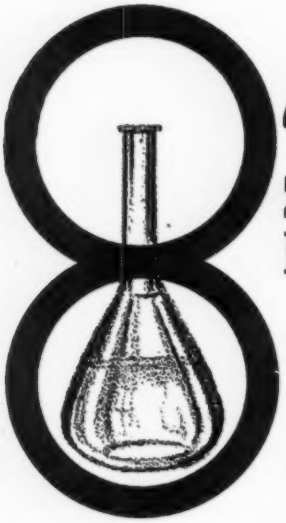
This edition has been completely rewritten and reset. Descriptions of 1,475 newly introduced drugs, biologicals and allergens have been added in order to keep abreast of important therapeutic advances. Obsolete preparations have been deleted. An attempt has been made to describe accurately, objectively, and concisely, the various preparations listed. Unreasonable claims have been omitted and the content checked by consultation of standard texts or original sources. The A.M.A. adoption of generic names has led to the formulation of another index. Listed alphabetically are the generic names under which heading appear the therapeutic agents which they have accepted. Th eaddition of this index makes available in one volume many of the facts which previously must be sought in New and Nonofficial Remedies and the U. S. Pharmacopoeia. Three other indices are also provided to render easy accessibility to any specific drug: a therapeutic index, a manufacturers' index and a general or all inclusive index.

Technical Cooperation With Underdeveloped Countries, by Philip C. Newman, John E. Ullmann, and Robert S. Aries, Published May 1952, 96 pages, papercovered lithoprint, Chemonomics, Inc., New York, $5.

Current interest of many American manufacturers is in the opportunities offered by economically underdeveloped countries. Aside from the Point 4 program, companies are seriously examining the development potential of countries in Latin America, Africa and Asia, which have the raw materials, but need capital and technical know-how. These are the challenging new frontiers for businessmen. This is the first book which reviews and analyses thoroughly what can be done in undeveloped areas in terms of concrete industrial planning. The subject is discussed both from a theoretical and a practical aspect. This reflects the combined efforts of the three authors: an economist, an industrial engineer, and a chemical businessman.

The Hair And Scalp, by Agnes Savill, M.A., M.D., Consulting Phyisican to Fitzroy Square Skin Hospital, Fourth Ed., 316 pp., Illus., The Williams & Wilkins Co., Baltimore, $5.50.

It is only fitting that "The Hair and Scalp" and the diseases thereof should be written by a woman because women, much more than men, are concerned with the preservation and appearance of their hair; also, they are concerned regarding hirsuities. A fundamental and scientific background is first given by Doctor Savill in chapters on the physiology of the hair, and one on its molecular structure and elastic properties, by Doctor Astbury. Doctor Savill scientifically describes in simple English the normal care of the hair and beneficial or harmful effects of such treatment as permanent waving, singeing, bleaching, and dyeing of the hair. Excellent concise descriptions are given of the multiple dermatoses affecting the scalp and hair, either primarily or secondarily, and emphasis is placed on their relation to internal diseases. Only a person of Doctor Savill's wide experience as a practitioner, gynaecologist, dermatologist, and editor for years of "Savill's Clinical Medicine" could bring all these important findings together in a single, small volume. She has incorporated into the book all that is of value from older treatises on the hair, including the extensive observations of Sabouraud, under whom she studied. She has correlated these data with the newest observations, many of which are her own.



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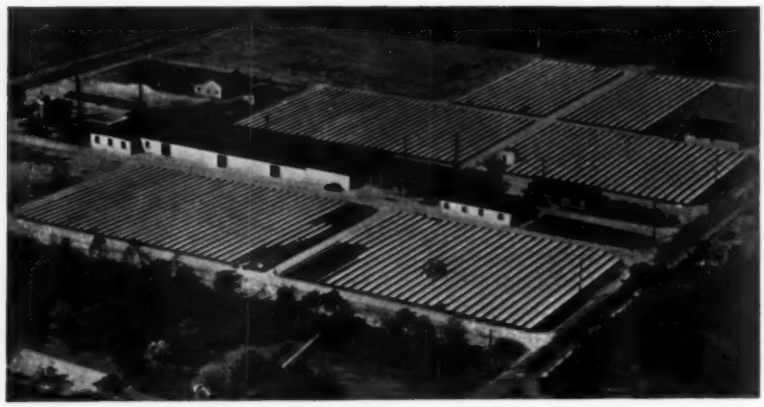

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"Cold" Wave Patent Situation Is "Hot"

(*Continued from page 33*)

By agreement dated June 21, 1951 the time for repaying the $300,000 was amended from January 21, 1951 until three years after the issuance of any patent on the application, but in no event later than December 31, 1954. The patent issued on December 4, 1951. Therefore the final date of repayment is three years thence. No part of the funds has as yet been repaid.

For some four years prior to the day the patent issued Sales Affiliates had been negotiating with Gillette and its predecessors in interest in The Toni Company (Toni is now a division of Gillette). The purpose of the negotiations was to obtain a license for the Toni business when the patent in suit should issue. These negotiations continued after suit was commenced.

The course of affairs, both before and after issuance of the patent, is peppered with facts which indicate that the parties have been proceeding under some tension. The trade was informed by apparently neutral sources that litigation against infringers of the issued patent was a distinct possibility.

* * *

There is evidence that the industry is in a very uncertain state at the moment. This is recent history the origins of which reveal most clearly the atmosphere in which these matters have evolved.

From the abundant affidavits and exhibits before me, I cannot help but conclude that Sales Affiliates has behaved over the past years in a manner such that it has gained a reputation in at least some of the trade as a litigious organization. There is a ring of authenticity to the reputation, and the relevance of its litigiousness will presently appear in this opinion.

* * *

Background of Litigation

On the day the patent issued, a rash of law suits broke out. These and the swift maneuvers following them are the complicating elements in the motions before me. Here in the Southern District Helene Curtis and Gillette each began their own actions (Civ. 72-280 and Civ. 71-284 respectively) for declaratory judgments declaring the patent invalid and that they were non-infringers. The suits were begun within a matter of hours after the patent issued, with Helene Curtis filing its complaint in Civ. 71-280 (first among all litigants here), fifty-nine minutes after the patent had issued at noon of December 4, 1951. Gillette filed its complaint in Civ. 71-284 here at 2:20 P.M. of that day. Later the same day Sales Affiliates filed four infringement actions against seven defendants in the District Court for the District of Columbia (Civ. 5017-51, Civ. 5016-51, Civ. 5018-51, and Civ. 5018-51).

On February 15, 1952 Sales Affiliates answered and counterclaimed for damages in both actions pending here. The answers in substance alleged Gillette's breach of a confidential disclosure and Helene Curtis' attempt to prevent the issuance of the patent. Sales Affiliates served its instant motions for summary judgment (Motions 1 and 3) on that day.

On the same day in Washington several other matters occurred which did not relieve the growing snarl. Gillette, its three customers, and M. Wahl & Son moved the court there for transfer of those actions to this district pursuant to 28 U.S.C. 1404(a). Gillette and its three customers answered the complaint in Civ. 5019-51 and thereby placed that action at issue. Sales Affiliates moved the court there for leave to add Procter & Gamble as "involuntary plaintiff" in all four Washington suits which had originally been filed in the name of Sales Affiliates alone. In addition, Sales Affiliates amended its complaint in Civ. 5019-51 as against Liggett, United Cigar-Whelan and Peoples to limit the charge of infringement to Gillette products although those three defendants also handle another product which is allegedly infringing and is one of the subjects of another infringement action in Texas. The manufacturer of that product, Gini Products, Inc. of Los Angeles, California, has offered to submit to the jurisdiction of this court, infra.

On March 3, 1952, Gillette replied to Sales Affiliates' counterclaim here, and on March 5, 1952 Helene Curtis replied to the counterclaim against it in its action here.

Thereafter on March 29, 1952, Sales Affiliates filed complaints in two infringement actions in the District Court for the Northern District of Texas, Dallas Division. Walgreen and Skillern who move here to intervene (in Motion 5) are defendants in one of those actions, Civ. 4606. They are both important Gillette customers. In the other action, Civ. 4605, Sales Affiliates sues C. V. Layden, doing business as Southwestern Beauty Products. This organization is solely a distributor of Helene Curtis products.

On April 3, 1952, Sales Affiliates filed notice in the Washington court of voluntary dismissal of its suit against M. Wahl & Son in Civ. 5017-51.

On April 7, 1952, Helene Curtis and Gillette each filed notes of issue placing their declaratory judgment actions on our trial calendar. On that same day, both Texas suits were set down for trial by the Texas court on July 2, 1952, before issue was joined. All three customer defendants in both those suits objected to this before issue was joined, but they did not prevail there.

* * *

On April 25, 1952 Sales Affiliates served a motion in Washington for leave to file a supplemental complaint against Gillette alleging Gillette's control of the defense of its three customer defendants in the Washington action, Civ. 5019-51, and for an injunction against Gillette's prosecution of its declaratory judgment action here. On that same day in Texas, Sales Affiliates served notice of two motions for hearing on April 28, 1952, for an injunction against Gillette's argument of Motion 4 here, and for leave to file a supplemental complaint alleging Gillette's control of the defenses of its customers Walgreen and Skillern who are movants in Motion 7 here. The Texas motions were heard on April 28, 1952 at which time the court denied the injunction application and granted Sales Affiliates leave to file the supple-

(*Continued on page 100*)

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Heyden's recent announcement of NEOMYCIN production in commercial quantities has won widespread acclaim from the medical and pharmaceutical professions. It offers new hope to millions who can now benefit from this newest of Heyden's wonder-working antibiotics brought within the reach of everyone through increased availability and reduction in cost.

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Crystalline Procaine Penicillin G, regular or micropulverized, sterile.
Crystalline Penicillin G Potassium, sterile.
Crystalline Penicillin G Sodium, sterile.
Crystalline Penicillin G Potassium, tablet grade.
Streptomycin and Dihydrostreptomycin in 1 kilogram containers.

Packaged forms (Vials) are also manufactured in all popular dosages, as well as Tablets and Troches of Penicillin (sealed in foil).

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Readers' Questions

BEARD SOFTENER: So far I have run across four beard softeners (liquid) and not one of them does an effective job of beard softening. Is the creation of a beard softening liquid such a hard nut to crack? Have you heard of any effective formula for one? Atlantic City.

It is my impression that almost all the formulas you have seen are based upon certain bile salts. These are still used to some extent in beard softening preparations but the modern surface active agents are also being incorporated in such products. A combination of the old and the new is offered by R. G. Harry in the following liquid beard softening preparation:

Sodium tauroglycholate	**0.5 per cent**
Sodium lauryl sulfate	**2.0 " "**
Glycerine	**6.0 " "**
Water	**91.5 " "**
Preservative	**Sufficient**

This is a creamy-yellow opaque liquid which foams on shaking.

VANISHING CREAMS: One of our customers is interested in a cheap vanishing cream—tinted with a non-staining brown color which will not darken or stain the skin and the brown color dye will mix readily with the cream. I would appreciate a formula for the above. Philadelphia.

A complete chapter on vanishing cream formulas is given in Thomssen's "Modern Cosmetics", from which the following simple formula is taken. Although preservatives are not included in the formula, it is desirable to add 0.1 per cent in cases where mold growth may develop:

Stearic acid	**24.00 per cent**
Water	**64.00 " "**
Glycerine	**10.51 " "**
Potassium hydroxide	**0.99 " "**
Perfume	**0.50 " "**

Melt the stearic acid, preferably by indirect heat. Dissolve the potassium hydroxide in the water, add glycerine and heat to 185°F. and slowly add to melted stearic acid with constant stirring. Perfume at 105°F.

With regard to suitable tinting or coloring agents, I would suggest that you use pigments rather than dyes, though dyes may be necessary to deepen the colors. In any event, I would strongly advise that before using any coloring agent, you contact one or more of the color suppliers who advertise in DRUG AND COSMETIC INDUSTRY.

NICOTINE REMOVERS: I will appreciate it if you can send me a formula or two for a product that will remove tobacco, nicotine and other stains from the fingers and nails. Toronto.

A simple nail bleach for removing discolorations, ink stains and the like may consist of 5 per cent of tartaric or citric acid in orange flower water or it may be formulated along the following lines:

Hydrochloric acid, pure	**4**
Glycerine	**100**
Rose water, triple	**900**

If an abrasive type nicotine stain remover is desired, it can be prepared as follows:

Beeswax	**10.0**
Paraffin	**5.0**
Mineral oil	**46.0**
Pumice	**8.0**
Borax	**0.5**
Water	**30.0**
Perfume	**0.5**

These can be molded to shape as desired.

PANTHENOL CREAM: It has come to our attention that a water-soluble cream containing 2 per cent panthenol is being advertised for use in heat rash, diaper rash, etc. We would appreciate it if you could advise us as to the reason for the inclusion of panthenol in a formulation of this type, and if you have literature references on this topic, they would be of interest to us. Memphis.

A report on the use of such a cream was published by P. R. Kline and A. Caldwell in the May 1, 1952 issue of the *New York State Journal of Medicine*. They conducted a study of the therapeutic value of panthenol in various types of skin conditions. Panthenol, the alcohol analog of pantothenic acid, was used topically in an aqueous dispersible cream in a series of 31 cases of a variety of dermatoses. The cream showed clinical evidence of epithelizing stimulation, and of antipruitic and antibacterial effect. In more than 80 per cent of the cases, response was either good or excellent, and particular effectiveness was noted among infants with infantile eczema, diaper rash, atopic and chronic eczema. In all cases, no evidence of sensitization was observed.

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- Acetophenetidin U.S.P.
- Aminopyrine U.S.P.
- Antipyrine N.F.
- Quinine Alkaloid N.F. and Salts

ANTACIDS
- Calcium Carbonate Precip. U.S.P.
- Magnesium Carbonate U.S.P.
- Magnesium Hydroxide N.F.
- Magnesium Trisilicate U.S.P.

ANTIBACTERIALS
- Sulfanilamide U.S.P.
- Sulfapyridine N.F.
- Sulfapyridine Sodium
- Sulfathiazole U.S.P.
- Sulfathiazole Sodium U.S.P.

ANTIBIOTICS
- Penicillin G Potassium Cryst. U.S.P.
- Penicillin G Sodium Cryst. U.S.P.
- Procaine Penicillin G Cryst.
- Streptomycin Calcium Chloride Complex
- Streptomycin Sulfate
- Dihydrostreptomycin Sulfate Cryst.

ANTIHISTAMINE
- Pyrilamine Maleate

BRONCHODILATORS AND ANTISPASMODICS
- Aminophylline U.S.P.
- Atropine Sulfate U.S.P.

EXPECTORANTS
- Ammonium Carbonate U.S.P.
- Ammonium Chloride U.S.P.
- Chloroform U.S.P.
- Creosote Carbonate N.F.
- Potassium Iodide U.S.P.
- Terpin Hydrate N.F.
- Sodium Citrate U.S.P.

SEDATIVES
- Ammonium Bromide N.F.
- Potassium Bromide U.S.P.
- Sodium Bromide U.S.P.
- Phenobarbital U.S.P.
- Phenobarbital Sodium U.S.P.

STIMULANTS
- Caffeine U.S.P. Hydrous; Anhydrous
- Caffeine, Citrated N.F.

VASOCONSTRICTORS
- Ephedrine Alkaloid U.S.P. Hydrous; Anhydrous
- Ephedrine Hydrochloride U.S.P.
- Ephedrine Hydrochloride Racemic
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Medical Aspects of Home Cold Waving

Since the introduction of cold-wave preparations for home use in 1945, says M. J. Brunner (*Arch. Dermat. & Syphil.* 65:316, 1952), consumer usage has increased year by year. As the agents used in the cold-wave process contact hair and skin, the subject becomes of direct interest to dermatologists. The purpose of his report was to examine the basic theoretical principles, materials, and techniques employed in the cold-wave process, primarily to clarify the mechanisms through which reactions of medical or medicolegal importance may develop. Figures obtained from the files of a manufacturer of home cold-wave products have been used to evaluate the frequency of these reactions. Previous reports have, in general, cited only isolated case histories of patients with some dermatologic or systemic manifestation allegedly associated with the use of cold-wave preparations, so that it has been difficult to obtain a clear concept of the causes, characteristic features, or frequency of occurrence of reactions.

Brunner observes that almost all home cold-wave solutions employ ammonium or sodium thioglycolate, or mixtures of the two salts, in aqueous solution. Concentration of thioglycolate ranges from 5.5 to approximately 7 per cent, with the pH raised to 9.0 to 9.5 by addition of ammonium or sodium hydroxide. So-called "professional" or beauty-shop cold-wave solutions have similar compositions, but with a substantially higher concentration of thioglycolate and alkali. With some variation, depending on the particular manufacturer, wetting agents, resinous or oily creaming agents, and perfumes are added to the wave solution to enhance its efficiency or acceptability to the consumer.

Reactions known or claimed to occur after the relatively simple operation of carrying out a home cold permanent wave may be divided into the following categories: cutaneous, hair alteration, ocular, and systemic. Dermatitis following the use of cold wave solutions has been reported by several workers. Analysis of these case reports suggests that the disorders may be divided into three groups: (1) primary irritant dermatitis, (2) allergic eczematous contact dermatitis, and (3) dermatitis due to causative agents other than cold-wave solution.

After considering the data, Brunner states that under conditions of normal use the average home cold-wave solution cannot be classified as a primary irritant. Personal observation in approximately 1,000 subjects disclosed no instances in which there was any reaction more severe than mild transient erythema of the scalp, forehead, or neck after the completion of the wave. Ninety-minute contact tests with aqueous ammonium thioglycolate of average waving strength also failed to produce any reactions greater than momentary erythema.

Although, as this evidence indicates, home cold-wave solutions are not primary irritants under conditions of normal use, irritant dermatitis following their use can occur. Such reactions are generally traceable to deviations in the method of application which enhance the keratolytic potentiality of the solutions. In some instances an impermeable cover, such as a plastic or waxed-paper cap, is used after application of the thioglycolate solution. Evaporation of ammonia and air oxidation of thioglycolate is thereby slowed, and since the effective concentration of the waving solution is then maintained at a higher level for a long period, potential irritancy increases.

Hair damage after cold waving has been the subject of several reports. As in the case of irritant reactions, consideration of quantitative differences between home cold-wave and professional-strength solutions, and the role of other agents applied to the hair are all-important factors in evaluating the reactions described by these authors. In actual practice, the dermatologist may be called upon to investigate cases in the following categories: (1) patchy hair breakage, (2) diffuse hair breakage, (3) abnormalities in hair texture, or (4) abnormalities in color or odor. Patchy hair breakage may result from excessively tight winding of the tress on the rod. (As noted in the preceding tabulation, during the preneutralization stage of waving the breaking strength is temporarily lowered.) Loss of hair may be apparent immediately, and is often accompanied by dermatitis limited to the portion of the scalp corresponding to the damaged tress. Acute external irritant dermatitis of this type is known as a "pull burn" among cosmeticians. Diffuse hair loss may result from overprocessing in bleached or otherwise damaged hair when failure to follow directions results in overprocessing, and it is occasionally seen following a severe eczematous dermatitis of the scalp.

Discoloration of the hair after waving is seen almost entirely in women with dyed hair. If a paraphenylenediamine derivative has been used, and not completely oxidized, off-shades of color may follow application of thioglycolate. So-called "color rinses" are composites of three or more acid and basic dyes, of a variety of hues including purple, red, green, etc. Some of these colors are more readily extracted from the hair during waving and shampooing than others, leaving the colors of the residual dye. Abnormal hair odor after cold waving is due basically to inadequate application of neutralizer, so that some residual mercaptan remains in the hair. The odor is particularly noticeable when the hair is rewetted on the first shampoo after the wave, and may be controlled by repeating neutralization.

Although reports dealing with systemic toxicity of thioglycolates have appeared, Brunner states that there were no recognized authentic cases of systemic intoxication following percutaneous application of waving agents in the series covered by his report.

Regarding ophthalmic changes, he observes that mild irritation may be expected after accidental entry of thioglycolate or neutralizer solutions into the eye, particularly if the agent is not flushed out with water. Experimental studies in which thioglycolate and neutralizers were instilled in rabbit eyes showed mild transient conjunctival irritation, leaving no visible change in any instance after seven-day follow-up ob-

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servation. No claims of ocular damage after accidental entry of waving solution into the eye were found in the representative period covered, other than occasional complaints of mild conjunctivitis when the solution was not flushed out of the eye with water as directed. In the entire file, covering some 70 million sales, there was one instance each of a complaint of optic neuritis and iridocyclitis.

Following a review of the available data, Brunner has come to the following conclusions: 1. Ammonium thioglycolate cold-wave formulations of the average concentration supplied for home use are below the threshold for primary irritation when used according to directions, on normal skin. Misuse may result in irritation, in some instances, when gross failure to follow directions enhances the keratolytic potentiality of the active agent. 2. Ammonium thioglycolate has an exceptionally low sensitizing index. In general, where sensitization does develop it is of the eczematous-contact-dermatitis type. 3. Hair damage may occur in some instances in which the hair has been previously altered by dyes and bleaches, particularly when directions for use are not followed and over-long processing times are employed. Such damage is apparently limited to the hair shaft, and no inhibition of growth is observable. 4. Direct systemic toxic manifestations were not seen after percutaneous application of ammonium thioglycolate.

Powder Base Creams

In the first of his series on the fundementals in the manufacture of cosmetics, W. P. Pepper (*Perf. & Essent. Oil Rec.* 43:40, 1952) presents much useful information on powder base creams. In his opinion the desired characteristics of a powder base cream are that: 1. It should be of smooth texture, free from granularity and not possessing a lustreless appearance. 2. It should be easily spread evenly over the skin surface without "rolling." 3. It should leave neither perceptible grease nor moisture on the surface of the skin which should be of matt appearance. 4. It should not be a skin irritant. 5. It should have good stability over the temperature range −5° to 40°C. 6. It should have a shelf life of two years without notable deterioration. 7. It should not discolor by atmospheric oxidation. 8. It should contain a preservative to prevent the growth of microorganisms. 9. It should be pleasantly perfumed.

The most popular cream as a powder base is the well-known vanishing cream which consists primarily of about 15 per cent to 20 per cent stearine in the form of an oil-in-water emulsion. The emulsion is obtained by the addition of sufficient potash or triethanolamine to convert one-tenth to one-fifth of the stearine to the corresponding soap which emulsifies the rest of the stearine. Most vanishing creams contain from 3 per cent to 10 per cent of glycerine or other humicants such as propylene glycol together with 1 per cent to 5 per cent of materials such as cetyl alcohol, lanette wax S.X., glyceryl monostearate, white oil or vegetable oils such as olive oil, castor oil or deodorized peanut oil with a small percentage of borax and a preservative.

It is most important that a particularly good grade of stearine should be used. The criteria are that the stearine should be of good white color and practically free from odor. The titre should be not less than 54°C. and the iodine value not more than 5. The acid value should be approximately 205.

The main variations in vanishing cream are variations in the hardness of the cream and in the sheen. The hardness is sensitive to the proportion of alkali, a low proportion produces a soft cream. The hardness is also much affected by the presence of small quantities of sodium salts. Increasing the proportion of glycerine has a fairly marked effect in softening the cream. The development of sheen is very sensitive to small changes in the composition of the cream. The sheen is apparently dependent on the growth of agglomerates of crystals of stearic acid with the potassium or triethanolamine soap. The effect of glyceryl monostearate and vegetable oil is to decrease the sheen or at least to delay its development. Vanishing cream is most likely to break down when chilled to a temperature below 0°C. Glyceryl monostearate, lanette wax, cetyl alcohol and glycerine have a marked effect in stabilizing a vanishing cream under these conditions.

Pepper notes that the most usual alkali for the production of vanishing cream is caustic potash but potassium carbonate can be used or triethanolamine. Triethanolamine has the advantage of producing a product of a rather lower pH, but triethanolamine creams frequently develop a yellow or brownish discoloration as they age. Care must be taken in selection of a perfume which does not discolor.

The vessels used in the production of vanishing cream are preferably stainless steel throughout. Aluminium mixing vessels must be avoided as caustic potash rapidly attacks this metal. Copper and alloys containing copper must also be avoided as very small quantities of copper in the cream cause a pronounced blue or green discoloration.

In the production of powder base creams other than vanishing cream, says Pepper, the formula is modified by decreasing the proportion of stearine and increasing the proportion of glyceryl monostearate and cetyl alcohol. A proportion of petroleum products such as mineral oil, petroleum jelly or mixtures of these materials is added. Generally the total fat content is raised to about 25 per cent. These products are frequently tinted. The tinting may be achieved by addition of a water soluble dye, an oil soluble dye or a solid pigment in the form of a finely divided powder.

Italian Hair Lotion

According to the claims of Italian patent 461,105, granted to C. Sinigalia, a hair lotion can be prepared by emulsifying the following materials in the order given:

Lemon juice, filtered	**41 Gm.**
Milk, boiled	**10 Gm.**
Castor oil	**3 Gm.**
Ethyl alcohol, 96%	**38 Gm.**
Water, boiled	**86 Gm.**

Bulletin on New Nonionic Surfactants

Comprehensive bulletin on the Nonisols has been issued by the Alrose Chemical Company, Providence 1, Rhode Island. The Nonisols are nonionic surface active agents of the polyoxyalkylene fatty ester type. Data on their characteristics are provided and indicative applications. including formulations, are given for many industrial fields. Certain of the Monisols are particularly useful in the manufacture of pharmaceuticals and toilet goods. Nonisol 300, for example, is useful for making basis for ointments, suppositories, pastes, foundation and cleansing creams lotions, hair dressings and liquid make-up. It also has properties that make it of interest in emollients, hand cleaners and barrier creams. Other Nonisols are useful in emulsion hair dressings and as emulsifiers and solubilizing agents for essential oils, perfumes, vitamin oils and sterols. A copy of the bulletin is available from the Alrose Chemical Co.

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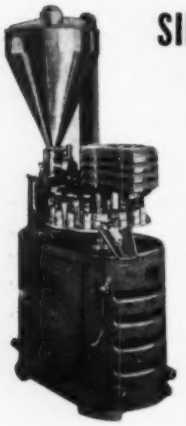

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Advancing Therapy

Quinacrine for Tapeworm

An improvement in the treatment of tiniasis or tapeworm infestation is reported by W. A. Soderman and R. C. Jung (*J. A. M. A.* 148:285, 1952). In a series of 11 patients with *Taenia saginata* infestation treated with quinacrine hydrochloride (Atabrine dihydrochloride), the drug was effective in 10 on initial trial and in the eleventh patient when treatment was repeated. The only toxic reactions of importance were nausea and vomiting, which, in general, were easily controlled. Quinacrine appears to be the drug of choice in the treatment of *Taenia saginata* infestation.

Vitamin B_{12} in Osteo-Arthritis

A preliminary report on the effect of vitamin B_{12} on 33 cases of osteoarthritis and two cases of ostoporosis is reported by J. D. Hallahan (*Amer. Pract.* 3:27, 1952) Crystalline vitamin B_{12} was given in doses ranging from 30 to 900 micrograms per week. All patients were requested to take the vitamin parenterally for at least three successive weeks. Although definite benefit was noted on all dosage schedules, 100 micrograms per week seemed to be the optimum for obtaining most rapid results. The following results were noted in 33 cases presented of osteo-arthritis: (a.) By the end of the first week 20 patients had benefited by the treatment, and of these, seven had obtained 100 per cent relief. (b.) By the end of the second week, four more showed partial relief and two more showed 100 per cent relief of symptoms. (c.) By the end of the third week a total of 16 showed partial relief of symptoms and a total of 14 had 100 per cent relief; or 30 of 33 patients showed some benefit in this arbitrarily selected period.

Both cases of osteoporosis began to be relieved with the first week of treatment and were entirely asymptomatic by the third week. In some patients who had obtained only partial relief during the three-week period, it was found that continuation of the treatment brought about 100 per cent relief. The longest interval between the last injection and continued absence of symptoms is five months.

No benefit was noted in three cases of rheumatoid arthritis and one case of metastatic malignancy to bone. Benefit was achieved in one case of spondylolisthesis and in the polyneuritis of diabetes mellitus. No toxic effects were noted, although one case of gouty arthritis was possibly aggravated by a trial of vitamin B_{12}.

Topical Chloramphenicol in Wound Infections

The value of locally applied chloramphenicol (Chloromycetin) in wound infection is indicated by M. H. Flint, H. Gillies and D. A. C. Reid (*Lancet* 1:540, 1952). They reported that local applications of 5 per cent chloramphenicol, either as a powder in lactose or as a solution in propylene glycol, were used to obtain a rapid bacterial clearance of a wide variety of wounds infected by penicillin-resistant or insensitive organisms. The chief organisms encountered were *Ps. pyocyanea*, *Proteus vulgaris*, and penicillin-resistant and streptomycin-resistant *Staph. aureus*. All but one case were sensitive to 2.5 per cent chloramphenicol. No organism became more resistant during or after treatment.

The bacterial clearance in 30 cases was obtained in an average time of 4 or 5 days. In many cases the time was shorter, especially in cases treated with chloramphenicol in propylene glycol, which seemed more effective than a powder containing the same concentration of chloramphenicol. No case failed to respond either clinically or bacteriologically to this local therapy, although 28 out of 30 cases had failed to respond appreciably to alternative local treatment and/or systemic chemotherapy. After local chloramphenicol many responded dramatically and all showed improved wound healing. No local or generalized allergic phenomena or deficiency of vitamin-B complex developed in any of the cases treated.

Flint and his coworkers are of the opinion that local chloramphenicol in penicillin-insensitive wound infection is a most useful adjunct to surgery, and there is a wide scope for its future use.

Evaluating Antiepileptic Drugs

In his discussion on the clinical evaluation of antiepileptic drugs, given before the Division of Medicinal Chemistry during the 121st meeting of the American Chemical Society, F. A. Gibbs pointed out that epilepsy is a disorder of the chemistry of the nerve cells of the brain. The epileptologist is now busily engaged in screening for clinical value drugs which have been previously screened by the experimental pharmacologist for their nontoxicity and for their power to prevent or alter experimentally induced seizures. In order to evaluate efficiently new antiepileptic substances, the epileptologist constructs a multidimensional clinical screen by arranging his cases according to the type or types of epilepsy, the severity of the disorder, and responsiveness or resistance to more or less standard antiepileptic substances. The extreme edge of this screen will contain cases with a high degree of various types of disorders that do not respond to recognized and previously tested substances. This is the most important part of the screen, for on this severe group the testing of new substances is justified, and information of maximal practical importance is obtained with a minimum of material in the shortest possible time.

Preliminary tests on the severe resistant end of the clinical screen detects drugs that are badly needed and does not waste time on drugs that are merely substitutes for available remedies. Care should be taken that the drug be tried on the full spectrum of epileptic disorders, lest a substance with a highly specific action be rejected as valueless. As therapeutic effect becomes evident, relative nontoxicity assured, and increasing amounts of the substance available, tests can be carried out further back on the clinical screen, on the less severe, less resistant cases. Thus, numbers are built up and idiosyncratic reactions become evident. This step is important, for until 1,000 patients have been tested the seriousness of special sensitivities cannot be estimated.

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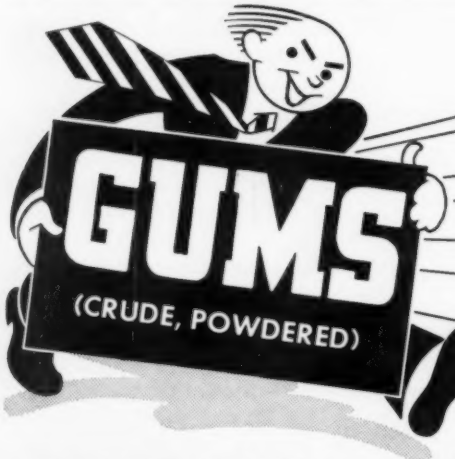

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for treating epilepsy and for the clinical testing of such agents do not differ in principle from those which have been found useful in the development of antibiotics. Since bacterial and virus infections produce epilepsy, improvements in the chemical control of bacterial and virus invaders of the nervous system will aid in the treatment of epilepsy.

Terramycin for Trichomonas Vaginalis Vaginitis

During studies on the use of terramycin for sterilizing the vaginal tract prior to pelvic surgery, H. J. Green (*Antibiotics & Chemother.* 2:119, 1952) noted that a number of patients who had wet smears positive for *Trichomonas vaginalis* prior to the use of the terramycin vaginal suppositories were free of trichomonas within 24 hours after the introduction of the first vaginal suppository. It seemed probable, therefore, that this infestation might be treated by the direct application of terramycin in the vagina. Subsequently, 21 patients with *Trichomonas vaginalis* vaginitis have been treated with terramycin vaginal suppositories for one week. Fourteen patients were followed six months and found to be cured. Six are apparently cured at one month. There was only one recurrence which responded to a 10 day course of terramycin vaginal suppositories. No untoward effects, systemic or local, were noted in this group of patients.

Fluoridated Salt vs Dental Caries

According to a report in *Science News Letter* (61:261, 1952) fluorine-containing salt may be developed as an alternative to fluoridation of water for the prevention of dental caries. This possibility has been raised in research done by G. Santesson at the University of California Medical Center. During the past year, he has studied 16 groups of hamsters which have been fed on a diet with an excessively high sugar content. Some of the groups received ordinary salt in their diets, while others received salt containing readily soluble fluorides. The groups receiving ordinary salt developed cavities as well as superficial enamel changes similar to the early stages of human dental caries. The groups receiving salt to which fluorides had been added remained free of cavities except for two minor cavities.

Santesson emphasized that his studies are preliminary, and that further studies must be made in hamsters before experiments can be made in human subjects. The scientist said that if further research demonstrates that fluorine can be effectively administered through salt certain advantages will be gained. He expressed the opinion that the biggest advantage would be in giving the individual a free choice in the use of fluorine. A second advantage involves minority groups who drink excessive quantities of water. These people include persons with diabetes insipidus; those afflicted with psychogenic polydypsia, a compulsion to drink water; and individuals who work in hot, dry environments such as steel mills and other factories. Fluoridated salt would also make the tooth-protecting chemical available to the rural population, constituting 35 per cent of the population, which does not have access to community water supplies.

Vitamin B_{12} Potentiators

In the studies reported by G. B. Griffenhagen and E. F. DeGuia (*J. Am. Pharm. Assoc.*, Scient. Ed. 41:181, 1952), a comparison was made between duodenal substance, desiccated stomach, folic acid, iron, and thymine as potentiators of vitamin B_{12}. Folic acid seemed to be the most active vitamin B_{12} potentiator tested. Red cell counts and hemoglobin levels of the chicks fed this combination returned to normal after 14 days of treatment. Iron did not have a significant effect when used with the combination of folic acid and vitamin B_{12}. The combination of vitamin B_{12} and thymine produced some hemopoiesis but was not sufficient to bring the red cell counts and hemoglobin levels back to normal. Neither duodenal substance nor desiccated stomach had any potentiating effect on vitamin B_{12}.

Cortisone for Atopic Dermatitis

Twenty-four patients with severe atopic dermatitis were treated with cortisone, administered intramuscularly, orally, and topically, by T. H. Sternberg, V. D. Newcomer and I. H. Linden (*J. A. M. A.* 148:904, 1952). Daily doses of 200 to 300 mg. of cortisone, administered either orally or intramuscularly for a period of 10 to 14 days, produced complete healing of the dermatitis in all but one patient, who was intolerant to the drug. This patient responded to subsequent corticotropin therapy. Intramuscular administration was observed to be the most effective method. Oral administration was satisfactory, but slightly higher doses and more frequent administration were required. Topical application of cortisone ointment was ineffective in a small group of patients. All patients relapsed after cortisone treatment was discontinued, irrespective of the method of terminating treatment. Remissions could be maintained with continuous cortisone therapy. Other effects of cortisone that have been insignificant in this series of patients are euphoria and diaphoresis in all patients, moon faces in two, pigmentation in two, and acneform eruption in four.

Sternberg and his colleagues believe that, at present, the use of cortisone in the treatment of atopic dermatitis should be confined to severe cases in which all conventional modalities have failed to arrest the progress of the disease. In these cases the course of therapy should be limited to four to six weeks. They believe cortisone therapy to be contraindicated in mild to moderate cases of atopic dermatitis.

Oral Contraceptive Studies

The possibility of an oral contraceptive came closer as a result of the work reported by G. J. Martin and J. M. Beiler (*Science* 115:402, 1952). In their preliminary studies, phosphorylated hesperidin was used because it is a nontoxic inhibitor of hyaluronidase, which causes disintegration of the protective coating of the ovum and permits sperm penetration. Experimentally, phosphorylated hesperidin was found to be an effective antifertility agent when given either intraperitoneally or orally. Of the animals receiving the compound orally, 20 per cent became pregnant and had successful deliveries, while among those given intraperitoneal injections, 17 per cent delivered. Thus, of a total of 54 rats, conception was prevented in 44. In contrast, all of the control animals conceived during the same period.

Approximately 80 per cent of the experimental animals became pregnant when they were remated after treatment with the phosphorylated hesperidin was stopped. Examination of the vaginal smears showed that the estrus cycle remains normal during the administration of the phosphorylated hesperidin. When given to the male rats, the material had no effect; its action appears to be specific to the female. Martin and Beiler stress that their work is of a preliminary nature and that more extensive studies must be made.

(*Continued from page 89*)

mental complaint. The supplemental complaint was filed on April 29, 1952 and alleged Gillettes control of the defense of Skillern and Walgreen, but it did not charge Gillette with infringement.

On April 29, 1952, I heard argument on the instant Motions 1, 2, 3 and 4. When they came before me that day, there was then pending in the District Court of the District of Columbia the battery of motions by defendants there to transfer Sales Affiliates' pending suits to its home district here in the Southern District of New York pursuant to 28 U.S.C.A. 1404(a). Argument on those motions was heard by the District of Columbia court on May 1, 1952. While the initial motions here were awaiting disposition, Sales Affiliates notified the District of Columbia court by letter of May 7, 1952 of its voluntary offer to withdraw all actions pending there. I received a copy of that letter to which I shall have occasion to refer infra.

On May 9, 1952 while Motions 1 through 4 were under consideration, Motions 5, 6 and 7 were served and filed.

On May 14, 1952 all the Washington suits were dismissed upon Sales Affiliates' motion.

On May 21, 1952, I heard argument on Motions 5, 6 and 7, and at that time the partnership Waval-Thermal of Burbank, California, and Gini Products, Inc. of Los Angeles, California, manufacturers respectively of "Nutri-Tonic" and "Pin-Wae" products, offered to submit themselves to the jurisdiction of this court for the purpose of avoiding a multiplicity of suits. These two products are included in charges of infringement in the action brought by Sales Affiliates against Walgreen and Skillern, in Texas. The manufacturers of the products are not before the Texas court and jurisdiction cannot be obtained over them there.

Thus, after no real conclusiveness, some bitterness and much peregrination, these matters now stand before me in the form of seven motions.

Motion 1

This motion by Sales Affiliates for summary judgment in its favor dismissed the Civ. 71-280 complaint of Helene Curtis is supported by two arguments which movant urges are conclusive against the maintenance of Helene Curtis' declaratory judgment action here. The arguments are that (1) Procter & Gamble is an indispensable party which has not and cannot be joined as a defendant in the action and (2) at the time the complaint was filed there was no actual or justiciable controversy between Helene Curtis and Sales Affiliates.

* * *

What one portion of the July 22, 1949 "Assignments" instrument gives the following portion virtually takes away. A reading of the instrument urges such a conclusion, and the behavior of Sales Affiliates vis-a-vis Procter & Gamble demands it.

Paragraph 5 of the instrument begins with language assigning to Procter & Gamble "the entire right, title and interest in and to" the patent application until repayment of the "advance royalties" of $300,000 with interest. Then follow the clauses by which the original assignment of title, whatever abstract nature that may be, is sliced away with excepting provisions. By the excepting terms Sales Affiliates retains the right to conduct all Patent Office proceedings at its own expense The right to grant licenses under the application is explicitly reserved to Sales Affiliates.

It retains the right to bring and defend suits on the assigned and reissued patents. It has the express power to sue in the name of Procter & Gamble if necessary, but at the expense of itself. Any recovery from such litigation belongs to Sales Affiliates.

The power which Sales Affiliates thus holds can be restrained only by loss of the patent on default of repayment or by the provision that in the event that it does not sue or license within three months after Procter & Gamble gives notice to it of an infringement, Procter & Gamble may then bring suit or license an infringer. This latter provision is in fact no check rein at all since it is completely a matter within the discretion and control of Sales Affiliates. There is no evidence that Sales Affiliates' virtual independence has ever been diminished by a notice from Procter & Gamble to sue or license, and there is abundant evidence that Sales Affiliates has so consistently been inspired by a zeal to litigate that the contingency of suit by Procter & Gamble seems unlikely in the extreme. To close one's eyes to the behavior of Sales Affiliates both before and after the signing of the instrument is to refuse a fair appreciation of the whole spirit in which this instrument was conceived and is being effected. The earlier statement of the background of litigation presents in only skeletal detail the frenetic and independent activities of Sales Affiliates. The apparently sovereign manner in which it has acted both in and out of litigation since the signing of the instrument is in no perceivable way different from its modus operandi before the signing.

The conception of Procter & Gamble as an indispensable party seems very clearly to be a Sales Affiliates afterthought completely devoid of any real merit. Recent history bolsters this conclusion.

The instrument was signed on July 22, 1949 and is still operative. Some two and one half years later—December 4, 1951—Helene Curtis and Gillette commenced their actions here and Sales Affiliates began the four District of Columbia actions. (Between those dates Procter & Gamble appears to have been a most passive party in so far as Sales Affiliates was concerned.) I have examined the four original complaints in the District of Columbia actions. A portion of the second paragraph of each contains the following language:

"Plaintiff [Sales Affiliates] is the owner by assignments duly recorded in the records of the United States Patent Office, of certain rights in United States Letters Patent No. 2,577,710, including the right to sue for infringement thereof and to recover damages therefor." Not a word is said in any of the complaints about Procter & Gamble. Sales Affiliates held itself out as the owner of the patent.

(*Continued on page 103*)

Animal Health

Stilbestrol for Nonbreeding Rabbits

One of the problems of the rabbit industry, says G. W. Boyles (*Vet. Med.* 47:80, 1952) is the nonbreeding doe. To overcome this difficulty in 50 New Zealand does, each female was injected with 0.25 to 0.5 cc. of stilbestrol in oil (each cc. containing 4 mg. of the synthetic estrogen). Every doe given this solution accepted the buck within 24 hours and conceived by the service. To date, 15 does have delivered young.

Subcutaneous Bacitracin for Pig Growth

In Report Series 34, issued during April, 1952 from the Agricultural Experiment Station, University of Arkansas College of Agriculture, P. R. Noland, D. L. Tucker and E. L. Stephenson point out that oral administration to weanling pigs of all of the commonly-used antibiotics has occasionally shown a variable growth response. It is thought that on these occasions something may have prevented the antibiotics from being absorbed from the digestive tract and getting into the animal's system. To circumvent this possibility, their experiment was designed to test the effect of the antibiotic when implanted beneath the skin for slow but direct absorption. Previous evidence with injected bacitracin indicates that this mode of administration promotes growth in chickens, and injected penicillin has been shown to increase the growth rate in weanling pigs. However, injected antibiotics that were effective were given intermittently at about 48-hour intervals.

In the new work, the experiments were undertaken to determine the value of the antibiotic bacitracin when implanted subcutaneously only once in pellet form. In this study, using 207 pigs, the subcutaneous implantation, at the age of two to five days, of a single 1000-unit bacitracin pellet at the base of the ear, produced an 11.3 per cent increase in the weight of pigs weaned at 56 days. This procedure provides a method of obtaining the growth-stimulating effect of bacitracin, at an age when the pigs are subsisting entirely or chiefly on the sow's milk, without effecting any other change in the usual method of raising pigs. No infections or other disorders were observed as a result of the implantation.

Diethylstilbestrol Implants in Chickens

The effect of diethylstilbestrol implants on the growth and dressing loss of broiler and fryer chickens has been studied by R. E. Moreng, O. E. Jacobson and R. L. Bryant (*Bimo. Bull. N. Dakota Agri. Exper. Station* 14:133, 1952). In their investigations straight-run New Hampshire chicks five weeks of age, were divided into two lots of approximately 95 birds each. One lot was treated with a 12 mg. pellet implant of diethylstilbestrol per bird and the other lot received no pellet. After five weeks the treated birds showed a gain of three-tenths of a pound more than did the untreated birds. Due to a probably slackening effect of the treatment, or the complete absorption of the pellet, at the end of seven weeks of treatment no difference was found in total gain between the two lots. This suggests that birds should be marketed within five weeks after they have been implanted. A greater dressing loss was sustained by the untreated lot than in the implanted group, although there was no appreciable difference in drawing loss between the two lots. Finish of the birds in the treated lot was observed to be improved over that of the untreated birds. Comb and testis weight was suppressed in the male birds implanted with the diethylstilbestrol.

Feeding Runt Pigs

The method of feeding, say J. A. Hoefer, R. W. Leucke and F. Thorp, Jr. (*Quart. Bull. Michigan Agri. Exper. Station* 34:327, 1952) are very important in swine management. With the thought that many pigs may be runts because of their inability or failure to select the right feeds when fed free-choice these workers decided to make a comparison between a complete mixed ration and a free-choice ration of corn and a complete supplement. The composition of the two rations used in their experiments are given below:

Ingredient	*Complete Ration**	*Free-choice*
Corn percent	72.5	.....
Soybean meal (solvent), percent	15.0	56.0
Meat scraps, percent	5.0	20.0
Alfalfa meal, percent	5.0	17.0
Limestone, percent	1.0	2.7
Dicalcium phosphate, percent	0.9	2.5
Iodized salt, percent	0.5	1.5
Trace mineral, percent	0.1	0.3
Riboflavin, gm./1000 lb.	2.0	6.0
Ca-pantothenate, gm./1000 lb.	4.0	12.0
Niacin, gm./100 lb.	6.0	18.0
B$_{12}$ (Merck 1622), mg./1000 lb.	6.0	18.0
Terramycin, gm./1000 lb.	5.0	15.0
Crude protein, percent	17.1	39.5

*Vitamin A and D concentrate added to supply the equivalent of 2000 I.U. of vitamin A and 250 I.U. of vitamin D per pound of complete feed and 6000 I.U. of vitamin A and 750 I.U. of vitamin D per pound of supplement.

Both rations were formulated so as to supply adequate protein, minerals, vitamins and an antibiotic. Two groups of typical unthrifty runt pigs were used to study the two methods of feeding.

The investigators found that there was no difference in rate of gain, but the pigs on the complete mixed ration were 24 per cent more efficient in converting feed to gain and were more uniform in appearance. All scouring stopped in both lots after one week on the fortified rations. It is recommended that for runt pigs a highly fortified ration including supplementary B vitamin and antibiotic be formulated and fed as a complete mixed ration.

Effect of Aureomycin on the Pig

The effect of aureomycin on diarrhea and on the vitamin B$_{12}$ and methionine needs of the pig has been studied by H. D. Wallace, R. F. Sewell, T. J. Cunha, C. B. Shawver and W. A. Ney (*Am. J. Vet. Res.* 13:186, 1952). Their data indicate that on a corn-peanut meal basal ration the pig requires supplementary vitamin B$_{12}$ in addition to aureomycin. There was no clear-cut change in the methionine requirement as affected by the feeding of aureomycin. The inclusion of either vitamin B$_{12}$ or methionine in the ration increased the rate of gain. No further increase in rate of gain was observed when both supplements were included in the ration. Aureomycin prevented a diarrhea which occurred periodically in other pigs.

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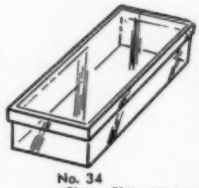

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(*Continued from page 100*)

On February 15, 1952 Sales Affiliates served its answers to the Helene Curtis and Gillette complaints of December 4, 1951, complaints in which it was alleged that Sales Affiliates was the equitable owner of the patent and Procter & Gamble was not an indispensable party. Sales Affiliates' answers to those complaints were served on February 15 and they alleged the agreement, but denied that Procter & Gamble was not indispensable.

In Washington, on February 15, 1952 Sales Affiliates then moved under Rule 21, Federal Rules of Civil Procedure, for an order under Rule 19(a), Federal Rules of Civil Procedure, permitting it to add Procter & Gamble as an "involuntary plaintiff" in its four District of Columbia actions. Apparently Sales Affiliates submitted no affidavits or proof to support its allegation that Procter & Gamble declined to consent to join as plaintiff.

The pattern seems apparent enough. How could Sales Affiliates defend here on grounds of Procter & Gamble's indispensability when in the District of Columbia it had originally sued on the representation that it was the "owner" of the patent? Substantive consistency demanded that Sales Affiliates represent Procter & Gamble as indispensable *everywhere*. Anything less than such a representation would have been an anomaly destructive of Sales Affiliates' original defense here of indispensability, hence the motion to add Procter & Gamble as involuntary plaintiff in the District of Columbia had to be made to cover its flanks.

Counsel for Sales Affiliates wrote to Judge Bastian on May 7, 1952 following the argument before him on the District of Columbia motions to add Procter & Gamble as involuntary plaintiff. A copy of the letter was sent to me, and the language on page 2 of the letter is additional evidence that the assertion of indispensability is simply devoid of substance.

If there is merit to the claim of indispensability, I am unable to square that with the purely discretionary basis which Sales Affiliates can deliver or decline to deliver Procter & Gamble into the jurisdiction of the District of Columbia court. Were there a valid claim of indispensability, it would be grounded on the hard fact that Procter & Gamble, or judicial administration, had some genuine interest at stake here.

* * *

What I have said is not to be construed as a holding that Procter & Gamble will not be permitted to intervene if proper application is made therefor. Indeed, such an opportunity would be quite in order. But, this is toto caelo from holding it is an indispensable party, which I conclude it is not in this declaratory judgment action.

I turn now to the second theory on which the granting of this motion is urged. Movant asserts that at the time the complaint in Civ. 71-280 was filed there was no actual or justiciable controversy between Helene Curtis and it. It is further asserted that Helene Curtis is barred from maintaining the complaint because its hands are soiled.

Fifty-nine minutes after the patent issued on December 4, 1951 Helene Curtis filed its complaint. During that interval no statements were made by Sales Affiliates that Helene Curtis was infringing the patent. This fact in vacuo is in sum and substance the basis upon which Sales Affiliates contends no justiciable issue exists.

Since 1941 Helene Curtis has built an extensive business in the manufacture, distribution and use of cold permanent waving solutions containing thioglycolic acid and ammonia, ingredients which are also embodied in the patent in suit. I have made earlier reference to neutral reports of what was then a potential state of warfare in the industry. There were non-neutral reports as well, and these and their surrounding circumstances really indicate whether there is truly a justiciable controversy here.

On May 7, 1948 Sales Affiliates prevailed in an infringement suit brought against Helene Curtis (which was then known as National Mineral Company) in the District Court for the Northern District of Illinois, Eastern Division. The two patents in suit there were so-called "machineless waves". On May 27, 1948 Sales Affiliates distributed to the trade an "Official Announcement" portions of which read:

"Sales Affiliates, Inc., whose products include the well-known Zotos and Jamal Machineless and Lustron Cold Permanent Waves has won an important victory in a patent suit against Helene Curtis, Inc.

"On May 7, 1948 Federal Judge Michael L. Igoe handed down a Bench decision in which he held [the two patents in that suit] were valid and were infringed by Helene Curtis * * *.

"The full significance of this victory over Helene Curtis is appreciated when it is realized that damages in excess of $1,000,000 may be awarded to Sales Affiliates * * *.

"Further, a company official now states: 'Sales Affiliates owns a U.S. Patent Application [for the patent in suit here] which covers the use of mercaptans (such as thioglycolic acid) in cold waving solutions as formulated and used today in every cold waving composition and method now on the market' ".

What is this if not a real indication to the entire trade that Sales Affiliates was girding its loins?

Neutral sources as well confirmed this. On May 29, 1948 in No. 16 of Volume 10 of "F-D-C Reports Drugs and Cosmetics", a trade paper for the cosmetics industry, the above press release was headlined:

"ANNOUNCING VICTORY IN MACHINELESS WAVE INFRINGEMENT SUIT, SALES AFFILIATES ASSERTS CONTROL IN COLD WAVE HOME KIT FIELD. Says claims have been allowed in pending patent application 'covering every cold waving composition and method now on the market.' Has granted several licenses but doesn't say whether

(*Continued on page 105*)

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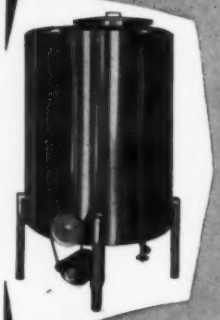

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(*Continued from page 103*)

home kits are covered. Damages from Helene Curtis estimated at $1,000,000, page 6."

On page 6, where the full story was reported, there appeared the following opening paragraph:

"Sales Affiliates, Inc., owner of numerous patents in the permanent waving field, indicated this week that *the active enforcement policy which it has pursued in regard to machineless waves will carry over to the cold wave field, including home kits.* Counsel for the Company (Morgan, Finnegan & Durham) said that a pending patent application unquestionably covers all such products. It was indicated that all claims in the application have been allowed; apparently the issuance of the patent can be expected at any time." (emphasis supplied).

There is evidence that the italicized portion was regarded by the officers of Helene Curtis as a clear threat that when the application referred to issued into a patent, Sales Affiliates would bring an infringement suit against Helene Curtis.

On July 15, 1948 Sales Affiliates sent out to the industry "An Open Letter to all Dealers Handling Machineless Waving Supplies" with an attached announcement which attempted an interpretation for the trade of the consequences flowing from the judgment of validity. Among other things, the announcement analogized the so-called invention to Edison's invention of the invandescent lamp and Bell's discovery of the telephone.

The judgment of validity upon which these reports were founded was reversed on February 7, 1949. Sales Affiliates, Inc. v. National Mineral Co., et al., 172 F. 2d 608 [80 USPQ 389] (C.A. 7, 1949), cert. denied 337 U.S. 940 [81 USPQ 573] (1949).

Helene Curtis had other significant and unmistakable storm warnings in the months just prior to the issuance of the patent in suit that it would be sued as an infringer when the patent was forthcoming.

Believing in the litigious nature of Sales Affiliates, and having these clear intimations of what was in store for it, Helene Curtis had a most genuine basis for commencing suit fifty-nine minutes after the patent issued.

* * *

I have examined with particular care the affidavits pertinent to Sales Affiliates' hearsay-riddled charge that an attorney for Helene Curtis conducted himself inequitably and illegally in certain Patent Office proceedings involving the patent in suit. I cannot make a determination on this issue based upon mere vehemence of affidavits. Upon the affidavits before me and the letter of the Solicitor of the Department of Commerce, dated April 23, 1952, I cannot accept with finality the validity of the serious charges made here. These charges must be resolved at trial by a full judicial determination on the merits. Furthermore, they are the basis for Sales Affiliates' counterclaim against Helene Curtis for $6,000,000 damages in Civ. 71-280.

Motion 1 is denied.

Motion 2

In this motion movant initially seeks leave to amend the complaint in Civ. 71-280 to add Helene Curtis Sales, Inc. (hereafter referred to as Curtis Sales) as party plaintiff in Helene Curtis' declaratory judgment action here.

Curtis Sales is a Delaware corporation. Its sole place of business is in New York, and from here it resells and distributes Helene Curtis' cold waving compositions. Curtis Sales also operates a cold permanent waving demonstration center in New York, where its uses the the cold waving compositions in its demonstrations of new waving techniques. Customers at the demonstration center are charged for the permanent waves given there.

The infringement threats (discussed supra) and the suits which Sales Affiliates brought in the District of Columbia and Texas have affected not only competing manufacturers of the cold wave composition (e.g. Helene Curtis) but also distributors, resellers and users thereof. In so far as Helene Curtis is concerned, one of its customers, M. Wahl & Son, was sued by Sales Affiliates in now dismissed Civ. 5017-51 in Washington on the theory that its sales of cold waving solutions manufactured by Helene Curtis was an infringement of the patent in suit. Another Helene Curtis customer, C. V. Layden, doing business as Southwestern Beauty Products, is a distributor of beauty products of which Helene Curtis solution is one, and it is being sued by Sales Affiliates in the Texas action, Civ. 4605 for infringement of the patent in suit. The theory of that suit is that Southwestern Beauty Products is "using and selling" the Helene Curtis composition.

The addition of Curtis Sales as a party plaintiff in Civ. 71-280 here is consonant with the holding that there is a justiciable issue as between Sales Affiliates and Helene Curtis. The issue between them is one in which Curtis Sales is very much a participant. The threats which Sales Affiliates laid down are as real a concern to Curtis Sales as to Helene Curtis. To this extent the issues of law and fact bound up in the original Civ. 71-280 complaint remain unaltered. In addition, Curtis Sales as a user and distributor of the competing and allegedly infringing solution brings into Civ. 71-280 the supplementary issues of whether the patent in suit validly covers the distribution and sale of the Helene Curtis solution (the only question at issue in the Texas suit against Southwestern Beauty Products) and whether the patent in suit validly embraces the method utilized by a hairdresser in waving by means of the allegedly infringing solution. The issue as to method appears genuine since the patent in suit apparently includes method claims among others. The Texas suit against Southwestern Beauty Products apparently will not adjudicate this issue.

To allow the amendment of the complaint will therefore bring within the ambit of Civ. 71-280 the totality of issues arising from this complex situation. As a matter of discretion, I deem it in the interests of justice to

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allow the amendment to the Civ. 71-280 complaint sought here.

* * *

The second phase of Motion 2 is a prayer for an expeditious hearing of Civ. 71-280 and for advancing it on the calendar pursuant to Rule 57 of the Rules of Civil Procedure. This is treated in Motions 6 and 7, infra.

In the third and final phase of Motion 2 Helene Curtis seeks an injunction enjoining Sales Affiliates and certain others

(a) from prosecuting the Texas suit Civ. 4605 in which Southwestern Beauty Products Co. is defendant until final adjudication of the present action, and

(b) from annoying harassing or intimidating customers or prospective customers, including beauty shops of Helene Curtis or Curtis Sales or other agents, distributors and beauty shop customers of Helene Curtis, by threatening or commencing suits for infringement of the patent involved in Civ. 71-280.

* * *

On the uncontested facts, there is nothing to be gained by a trial in Texas rather than here, and there is much which commends the conclusion that this forum will best serve the ends of justice. The contrary conclusion is not only a defiance of fact but a subscription to the sporting theory of justice as well.

An injunction will issue. The only question is its scope. The first phase of the application prays for an injunction enjoining Sales Affiliates and others from prosecuting its Texas suit against Southwestern Beauty Products. As matters presently stand, this court is not competent to issue such an injunction. C. V. Layden, doing business as Southwestern Beauty Products is the defendant in the Texas action but is not a party to this action.

* * *

Layden has offered to submit to the jurisdiction of this court. If the offer is tendered formally and unconditionally that C. V. Layden, doing business as Southwestern Beauty Products intervenes as a party plaintiff in Civ. 71-280, it will be so ordered by the court. Immediately thereupon, an injunction will issue restraining Sales Affiliates from prosecuting or taking any further steps in the prosecution of Civ. 4605 in the United States District Court for the Northern District of Texas, Dallas Division, in so far as Helene Curtis' products are concerned until the final disposition of Civ. 71-280 here in the Southern District. Since this court does not have jurisdiction over Procter & Gamble, a fortiori no restraint is placed upon it in the Texas suit.

The second phase of this application prays for an injunction enjoining Sales Affiliates from annoying, harassing or intimidating customers or prospective customers, including beauty shops of Helene Curtis or Curtis Sales or other agents, distributors and beauty shop customers of Helene Curtis, by threatening or commencing suits for infringement of the patent in suit Civ. 71-280. This aspect of the motion for an injunction is denied at this time. Because of the ultimate

disposition of these motions there is the distinct possibility that both Civ. 71-280 and Civ. 71-284 will proceed to trial with dispatch. In the light of this, the instant aspect of this motion in its specific applications can be fully determined on the merits at the trial. It is likely that irreparable injury will not result with respect to this aspect of the case between now and the imminent trial. Of course, applications to stay infringement actions brought between the date hereof and the commencement of the trial may be made in the proper case.

Motion 3

In this motion Sales Affiliates moves for summary judgment in its favor dismissing Gillette's complaint in its declaratory judgment action here, Civ. 71-284. The grounds upon which the motion is brought are precisely those underpinning Motion 1.

Having carefully analyzed the abundant file covering this motion, I am of the opinion that Sales Affiliates has no more proved its assertion of Procter & Gamble's indispensability here in Civ. 71-284 than it has in Civ. 71-280. Furthermore, there are even more data here than in Civ. 71-280 to indicate that indeed a justiciable controversy existed at the time this action was commenced.

Here, as in Motion 1, Sales Affiliates makes charges that its adversary has come before the bar with unclean hands. The basis for this allegation is factually distinct from that made against Helene Curtis, yet there is the common element that in both cases the charges cannot be accepted on the paper proof offered. The charges made against Gillette, like those against Helene Curtis, can be resolved with propriety, only after a trial. Likewise, as in the case of Helene Curtis, they form the basis of Sales Affiliates' counterclaim against Gillette, and this will have to be decided upon the trial of Civ. 71-284.

Motion 3 is denied.

Motion 4

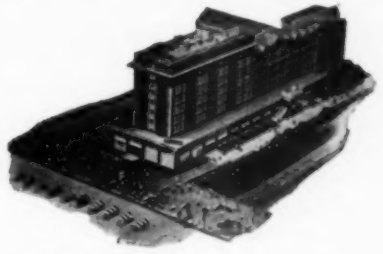
Gillette moves for an injunction restraining Sales Affiliates and certain others from

(a) prosecuting or taking any further steps in the prosecution of Civ. 4606, the Texas suit in which two of Gillette's customers (Walgreen and Skillern) are defendants until the final disposition of Civ. 71-284;

(b) harassing, annoying or intimidating customers or prospective customers of Gillette by threatening or commencing suits against them for infringement of the patent in suit.

It further moves for a trial preference, which is treated in Motions 6 and 7.

The earlier discussion in Motion 2 of the factors applicable in a problem such as this obtains equally in the consideration of this motion for an injunction. In dealing conclusively with this problem, these seem to be the crucial facts. Gillette brought its suit before Sales Affiliates (again this being true whether priority be measured by Sales Affiliates dismissed Washington action or by its pending suit in Texas). What of the



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issues as between suit here and in Texas? In Texas, the suit is based on infringement by use and sale. Affidavits before me indicate that use may be a false issue. At any rate, if both issues are genuinely in the Texas suit, they nevertheless appear here, as does the issue of manufacturing. Gillette, although joined as a defendant in the Texas action is a party thereto only on the issue of its alleged control of the Skillern-Walgreen defenses and not as to manufacturing.

Here there are the further issues of Gillette's manufacture of the allegedly infringing product and Sales Affiliates' counterclaim against Gillette's allegedly inequitable behavior. It is most clear that all of the issues springing from the patent in suit are pending decision in this forum. The same principles regarding a decree here as against a decree in Texas which apply in Civ. 71-280 are equally applicable in this instance. A decree here would resolve all the issues and obviate multiplicity where a decree in Texas would not.

From the standpoint of the convenience of parties, witnesses and access to the sources of proof the balance is overwhelmingly in favor of this court rather than the Texas forum.

Because of these considerations and those discussed upon the disposition of Motion 5, Sales Affiliates is hereby enjoined from prosecuting or taking any further steps in the prosecution of Civ. 4606 in the United States District Court for the Northern District of Texas, Dallas Division, against Gillette, Walgreen and Skillern, in so far as the Gillette product is concerned until the final disposition of Civ. 71-284. Again, no restraint is placed upon Procter & Gamble since it is without the jurisdiction of this court.

That portion of the application which seeks to restrain Sales Affiliates from annoying, harassing or intimidating customers or prospective customers of Gillette by threatening or commencing suits against them for infringement of the patent in suit is denied on the same basis embodied in the denial of this phase of Motion 2.

Motion 5

Walgreen and Skillern move under Rule 24 of the Federal Rules of Civil Procedure to intervene here in Civ. 71-284 and for an order staying Sales Affiliates from proceeding in the Texas action, Civ. 4606, in which Walgreen and Skillern are defendants. The ground upon which the motion is sought is that movants have a substantial interest in the subject matter of Civ. 71-284 and common questions of law and fact exist with respect to their claim and Civ. 71-284.

Movants are Texas corporations operating chains of drug stores in which the hair waving products of Gillette and other manufacturers are sold. The basis for the action against them in Texas is that they have allegedly infringed the patent in suit by selling the hair waving products of Gillette and two other manufacturers: "Nutri-Tonic" products of the Waval-Thermal Company, and "Pin-Wae" products of the Gini Products, Inc. These last two manufacturers are California corporations which are not subject to suit in Texas and are not present before the Texas court, although their products are there charged to infringe. Each has indicated by affidavit its willingness to submit to the jurisdiction of this court. I shall not pass upon such informal indications. If Waval-Thermal Company and Gini Products, Inc. desire to pursue this, the applications should be made in a formal manner, upon notice to all interested parties.

The arguments advanced in favor of the motion are that trial here will avoid a multiplicity of suits and this district is the most convenient place for it. In so far as multiplicity is concerned, the total situation is such that a trial in this forum is clearly the way to an economy of litigation. As I have indicated, this is true for both the Gillette and Helene Curtis actions here. The instant motion is for intervention in the Gillette action, hence the focus is on that point for the moment.

The arguments in opposition do not defeat the considerations which lead to the granting of the motion.

It is first said in opposition that the motion is made "to induce this court to cut in ahead of the [Texas] trial fixed for July 2, 1952." To answer this charge effectively, it is necessary to keep continually in mind the genesis of that suit (as well as the companion suit against Southwestern Beauty Products). It is also necessary to remember what it is that is being "cut in" on.

The Texas trial will come to fruition only because substantially the same issues there were pending in the Washington suits but were aborted by Sales Affiliates' voluntary dismissals. Having tried the Washington forum and found it wanting, for whatever reasons Sales Affiliates saw fit, it is in the Texas forum for yet another turn at litigation. It seems inequitable in the extreme to our courts as well as to opposing adversaries to permit Sales Affiliates to shop in forums until it can choose one in which it can find something to be used as a lever to dislodge what would otherwise be an orderly and inclusive judicial procedure elsewhere. That is what is attempted here. The Texas trial date of July 2 is the lever. It is a date based, I assume, on the fact that the calendar of that court is virtually up to date. I full well appreciate the need for expedition, and a proper forum in which this can be had is a valid concern of a patentee. But the condition of a court calendar is not and cannot be the sole criterion for deciding an appropriate forum in a complex context such as this. The date July 2 is essentially all that is unique about the Texas action. It embraces no issues which are not covered here, and considerably fewer. In spite of the fact that defendants there are residents of Texas, it is still most apparent that convenience of trial is here and not in Texas. In any such suit, the patent is the prime issue, and virtually all the sources of proof thereon are in metropolitan New York. Most of the possible witnesses are in this area and are not subject to the compulsory process of the Texas court. Sales Affiliates' headquarters are here. Procter & Gamble's interest in

(Continued on page 116)

Perfumer's Shelf

Volatility and Tenacity of Aromatic Chemicals

Important information on the volatility and tenacity of aromatic chemicals has been published by A. Muller (*Parf. u. Kosmetik*, July and Sept. 1951, through *Perf. & Essent. Oil Rec.* 43:21, 1952). The following procedure was used on these studies: A strip of blotting paper approximately three-quarter inch wide and six inches in length is weighed and 0.2 to 0.3 Gm. of the substance to be tested is then evenly distributed on one side of the strip. In the case of solids 10 per cent solutions in alcohol are used. As soon as the substance is absorbed by the paper (or after 30 minutes in the case of solids), the weight of material is determined. To determine the substance's volatility, the loss in weight and the actual area of absorption are measured in intervals of minutes, hours, days or even weeks. Any change of odor, which may occur, is also noted. These data are used to calculate the relative coefficient of volatility.

In addition, temperature and moisture contents of the atmosphere were registered. During preliminary experiments it was proved that both the actual size of the paper and the atmospheric temperature had important bearings on the result and they were therefore standardized.

A wide selection of commonly used aromatic chemicals were tested and the published tables lead to certain conclusions, some of which are given below: the first named substance being the most volatile in the respective group and the degree of volatility decreases from member to member: (1) Aliphatic and hydroaromatic sesquiterpene alcohols: menthol, linalool, terpineol, citronellol-d = citronellol-l = geraniol, vetiverol. The alcohols examined were all volatile without undergoing perceptible changes on the paper. (2) Aromatic carbinols: methyl phenyl carbinol, dimethyl benzyl carbinol, methyl phenyl ethyl carbinol. The latter suffered change on the paper after 204 hours. (3) Aliphatic aldehydes: C_6 = C_7, C_8, C_9, C_{10}, C_{11} unsat., C_{12} methyl nonyl, C_{12} lauric. All aldehydes examined underwent perceptible changes due to oxidation. (4) Aliphatic esquiterpene aldehydes: Citronellal changed only slightly and was very volatile. Hydroxycitronellal showed a very low value for relative coefficient of volatility but it is remarkable that this aldehyde loses only 13 per cent of its weight after 2,000 hours exposure to the atmosphere and is then practically odorless.

Antifermentation Action of Orange Oil

In a letter published in *Nature* (168: 999, 1951), D. A. A. Mossel calls attention to the antimicrobial properties of orange oil. As the result of an observation that non-preserved fruit drinks prepared from emulsified orange oil inhibited the fermentation of an inoculum of *Saccharomyces cerevisiæ* he made some quantitative experiments on similar lines. It was found that 0.01 per cent or more of Florida orange oil (aldehydes 1.6 per cent) increased the time required for complete fermentation of an inoculum in a semi-synthetic medium from 48 hours to at least 96 hours. Further investigations on Guinea orange oil showed that the terpenes possessed the same order of fermentation-inhibiting activity as the oil, whereas the oxygen fraction was inactive in concentrations occurring in additions of orange oil of the order of 0.1 per cent.

Organoleptic Panel Testing

The value of organoleptic panel testing as a research tool is indicated by L. C. Cartwright, C. T. Snell and P.H. Kelley (*Anyl. Chem.* 24:503, 1952). They state that organoleptic panel test methods can be utilized by any laboratory group having 5 to 15—preferably 15—people available for organoleptic training. The method is suitable for solving problems or answering questions concerning foods and beverages, not susceptible of solution by other analytical procedures. The principal practical applications deal with detecting the source of a disturbing off-quality in flavor or taste, the effect of a specific ingredient added to improve quality, and probable consumer preference of competing products similar in general character but differing somewhat in flavor. Various aspects of such problems are considered in terms of the experience of the group; examples illustrate different types of applications drawn from many industrial problems. Methods of scoring, the training of panel members, and statistical treatment of results are discussed. It is noted that although organoleptic panel testing has been used most extensively in the evaluation of odor and flavor in foods and beverages, there are numerous examples of its application to other problems. Most of the basic principles are directly applicable to the evaluation of any sensory stimulus.

Essential Oil of Horse Radish

In a study of horse radish and its essential oils, A. Guilaume and A. Shajik (*Tunisie med.* 39:951, 1951 through *Chem. Abstr.* 46:3217, 1952) found that powdered *Aromoracia lapathifolia* contained over 1 per cent of essential oil. This was made up of allyl isothiocyanate and sulfide in equal parts. The ratio of the same oil in the leaves and in the collar was under 0.5 per cent. In aged preparations, myrosin was often decomposed and only partially hydrolyzed the glucoside; giving low results. The addition of 20 per cent white mustard meal is proposed to activate the liberation of allyl compounds.

Spanish Fennel Oils

A number of samples of the essential oil of *Anethum foeniculum*, obtained from commercial sources or prepared by steam distillation, were analyzed by J. M. G. Marquina and F. P. Cuchi (*Farmacognosia* 11:209, 1951). The specific gravity of these samples of Spanish fennel oil varied from 0.813 to 0.962. The index of refraction ranged from 1.4960 to 1.5153. The optical rotation was irregular; some essences being levorotary, others dextrorotary or inactive. The freezing point lay between—15° and—43°C. Several oils were fractionated and the physical constants of the fractions were determined by Marquina and Cuchi.

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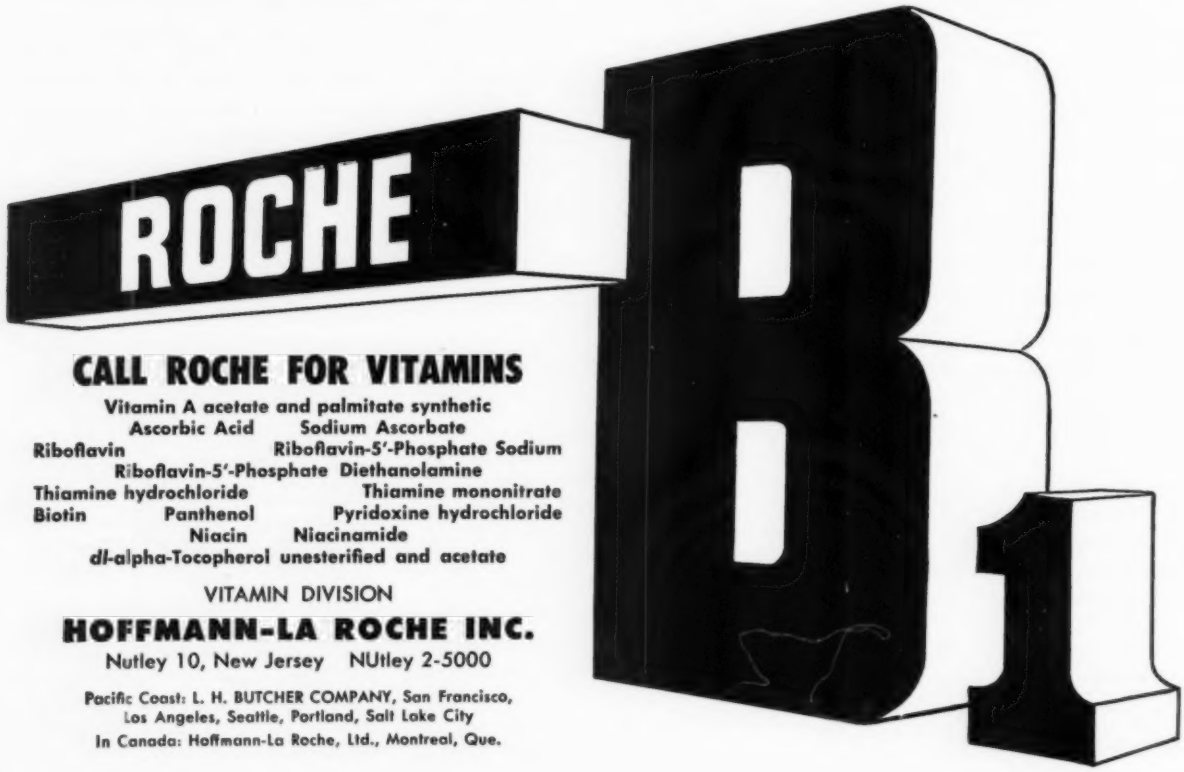

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Abreast Of The Markets

Nelson Predicts no Shortage of Essential Oils From Europe; Spot Market More Active; Botanicals Quiet

There was quite a wide range of opinion last month on the state of the markets, with some essential-oil houses reporting brisk business, and others complaining that transactions had slowed down considerably. In the botanical field, business was said to be very slow indeed; firms were filling orders of long standing but were finding that new orders were slow in coming in. One spokesmen in the essential-oil field stated that prices appeared to be pretty well stabilized at the present time, and he thought they had reached their proper price levels. This opinion follows pretty closely in respect to last month's price changes and the small degree of change in the essential-oil graph, and especially in the botanical chart, where there were hardly any changes.

A first-hand report on the essential-oil market was offered in June by Joseph D. Nelson, executive vice-president of the Andrew Jergens Co., who, during a 41-day trip, visited North Africa, Italy, Portugal, Spain, France, Ireland, Sweden and Norway. From what he saw and heard on his trip, Mr. Nelson has concluded that "there is no foreseeable shortage of essential oils for use in cosmetics and beauty-aid manufacture. French oil suppliers indicated there would be a plentiful supply of the oils used in the manufacture of soaps, lotions, creams and perfumes."

There were several notable features in other phases of the market during the month. Alcohol was still in the balance, with the Cubans apparently holding out for a 20-cent molasses price. Fermenters in this country, however, expected them to yield any day and come down to the 12-cent figure. The government cleared up the lanolin picture somewhat by issuing uniform price ceilings which are to apply to all manufacturers and processors in the industry.

Carnauba wax continues its upward climb as a result of the Brazilian government's support program which has been encouraging the exporters to delay transactions until the demand warrants it.

The vanilla bean market has hit a new low, and while consumers have not yet taken advantage of the favorable prices, it has been suggested that natives in Madagascar are becoming discouraged at the lack of interest in the product. They are beginning to neglect their plants, with the result that in a few years there will be another shortage.

Menthol Very Quiet

Menthol is seasonably quiet, the Brazilian material now being quoted at $6 and the Chinese, which is nominal, at $7.40. With the synthetic menthol at $6.80, considerable competition has developed between the two materials and is a major reason why the natural product has been reduced so greatly during the past six months.

No Change in Quicksilver

Quicksilver was still being quoted at $200 a flask in June, with reports that it might be had in some quarters for a few dollars less. According to government figures, domestic production during the first three months of this year amounted to 3,050 flasks as compared with 880 flasks during the same period in 1951. The United States imported 13,309 flasks through March of this year which amounted to a little more than the 12,805 flasks brought in over the same period last year.

Glycerine Stocks Reduced

Some sources estimate that over 4,000,000 pounds of synthetic glycerine was lost as a result of the recent petroleum strike and, as a result, a price advance has been suggested as possible, although it has not occurred yet. To add to the tight situation, the United States has not been importing any crude material from Argentina lately because that country has been selling most of its exported glycerine to European countries.

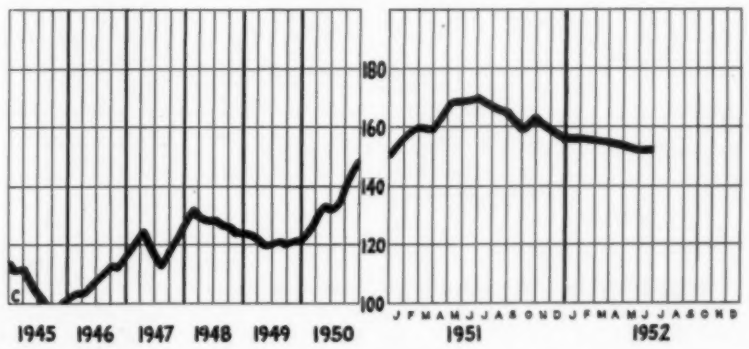
Brazil's 1951 Wax Exports Down

Brazil's exports of carnauba wax in 1951 were at least 10 per cent less than the record total of 12,757 metric tons in 1950, according to *Foreign Commerce Weekly*. Exports from the states of Ceara and Piaui, which account for most of the total, amounted to 8,760 tons, compared with 10,350 in 1950, based on unofficial figures. Moderate increases have been noted in the amount of wax shipped to European and Asian markets.

Several factors affected the 1951-52 crop, among them, a severe drought in

(*Continued on page 114*)

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100



The cosmetic raw materials index went up slightly from 152.0 to 153.2. Lanolin, menthol and zinc oxide were lower.

Prices quoted in this section were current on the first of this month.

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Vanilla Bean Prices at Very Low Level, Business is Average, with Dealers Advising Consumers to Stock Up; Molasses Picture Unsettled

In the face of additional reductions in vanilla bean prices, dealers in the industry are advising their customers to make their purposes at the present time, now that costs are so attractive to the consumer. Bourbon beans went down 15c to $2.75 a pound; Mexican cuts, down 30c, to $3.20 a pound; and Mexican whole beans, down 50c to $4. One spokesman has indicated the perplexing nature of the market by saying that when the beans were as high as $10, consumers thought nothing of making large purchases, but now that they are around $3, buyers are still hesitating, trying to wait until an upturn occurs. If they buy now, some reason, the price may go down 10c or more next week.

While the vanilla bean business is not booming at the present time, it is fairly active, with a normal demand present from day to day. The low price and the failure of extract manufacturers and other consumers to take advantage of this low figure at the present time is having an adverse effect at the source, according to reports. In Madagascar, for example, the natives have become disgruntled with the low prices and have begun to neglect some of their plantations in order to deal in more speculative commodities such as coffee and cloves. This turn of events will not show much of an effect for several years, but at the end of two or three years, after the price has worked up to an attractive level from the vanilla-bean grower's point of view, there will be too few beans to go around. The price will probably then continue higher, the supply will dwindle, and there will be a dire vanilla-bean shortage. What is happening this month suggests just such a turn of events. It does not seem that the vanilla prices, which are lower than they were 50 years ago, will fall much more.

Alcohol Still Perplexing

The alcohol picture has not cleared yet, as the molasses producers in Cuba by the end of June were still asking a 20c price per gallon, and fermenters in the United States were more interested in a figure around 10c. Cattle feed producers appeared willing to go as high as 12c a gallon, but no higher.

At that time there was ample alcohol on hand for all needs, which meant that there was no rush on the molasses industry to complete sales. It may be that the Cuban Sugar Institute believes it will be in a better bargaining position if it delays coming to a price agreement at the present time. On the other hand, there are indications that Cuban's molasses crop, which was last month predicted at about 350 million gallons, may reach as high as 400 million gallons.

Spokesmen in the industry, however, believed there would be a price break in the molasses any day, since the pressure from the excessively high stocks in Cuba was continually building up.

Adding a little more light to the over-all alcohol picture in the United States, the Bureau of Internal Revenue released the following import figures into this country of ethyl alcohol during the first four months of this year. The total was 25,099,000 wine gallons, while during the same period 83,900,000 gallons of industrial alcohol were produced in the U. S. Of the 83,900,000 gallons, 44,700,000 gallons were derived from ethyl sulphate and ethylene gas, 18,700,000 gallons from grains, 18,100,000 gallons from molasses and 2,400,000 gallons from other raw materials.

The following figures on the supply, production, withdrawals and stocks of ethyl, completely denatured and specially denatured alcohol apply to the month of April, only, as compared with the same month in 1951. This data was released by the Alcohol and Tobacco Tax division of the Bureau of Internal Revenue, Treasury Department, in early June.

Production

	Proof gallons 1952	1951
Ethyl	33,856,608	37,739,528
*Completely denatured	15,085	50,008
*Specially denatured	18,353,146	28,154,155

Withdrawals

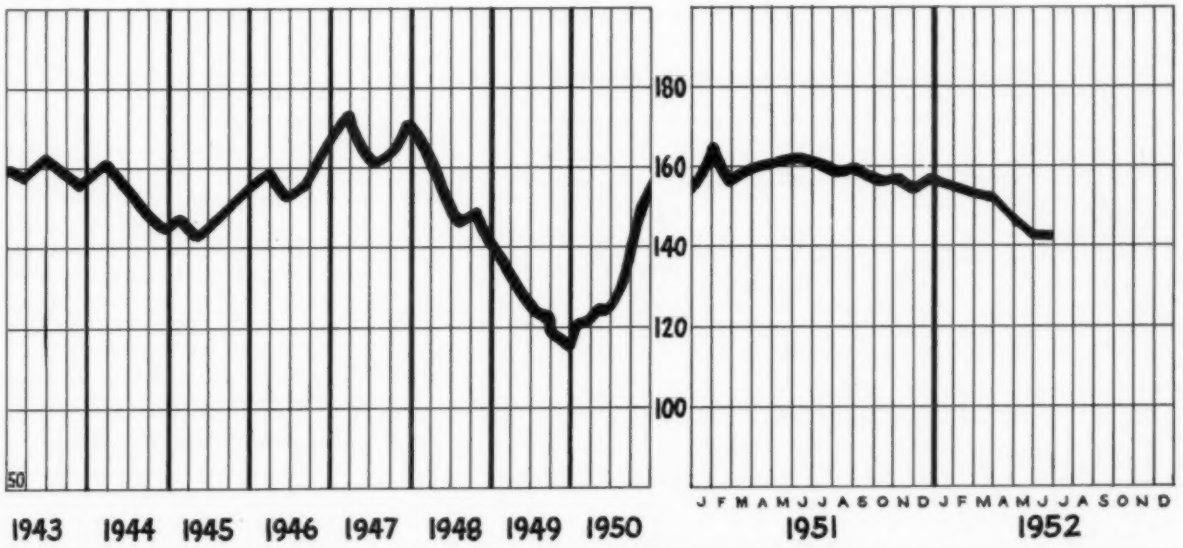
	Wine gallons 1952	1951
†Ethyl, tax paid	1,754,794	2,051,186
tax free	43,384,530	53,286,991
*Completely denatured	20,290	50,150
*Specially denatured	20,261,799	21,943,256

Stocks

	Gallons 1952	1951
†Ethyl	95,684,901	71,000,599
*Completely denatured	44,960	31,137
*Specially denatured	12,047,978	8,682,488

*Wine gallons. †Proof gallons.

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for June fell slightly from 141.5 to 141.3.

June Price Changes

UP

Lemon Oil, Italian 15c
Lime Oil, Distilled 50c
Spearmint Oil 75c
Wormseed Oil 25c

DOWN

Bay Oil 25c
Buchu Leaves 5c
Caraway Oil 25c
Carnauba Wax No. 1 8c
North Country No. 3 3c
Citronella Oil, Ceylon 5c
Cocoa Butter 2c
Eucalyptus Oil 15c
Mace Oil, Distilled 10c
Pennyroyal Oil 35c
Safrol 5c
Sassafras Oil, Artificial 5c
Senna Tinnevelly 2c
Vanilla Beans,
Bourbon 15c
Mexican Cuts 30c
Mexican Whole 50c

Cocoa Butter Down 2c

With supplies more than adequate, the price of cocoa butter was reduced to 73c a pound. Demand for the item was said to be quite sluggish last month.

Ergot in Better Supply

There have been several reports of lower prices on ergot, with some sources quoting anywhere from $6 to $7 a pound. One reason for the softening tone may be the fact that Portugal has made several new crop offerings which have eased the supply situation.

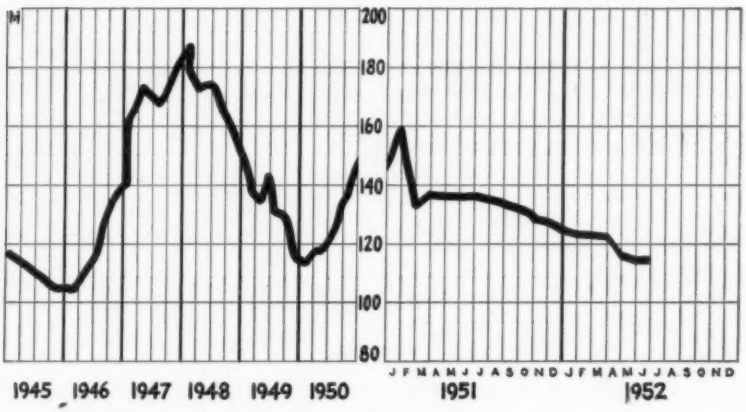
Brazil's Wax Exports Down

(*Continued from page 111*)

the northeastern part of the country in 1951. This caused large-scale migration of the labor from the stricken area. The unfavorable weather conditions also retarded full development of the fronds from which the wax is derived.

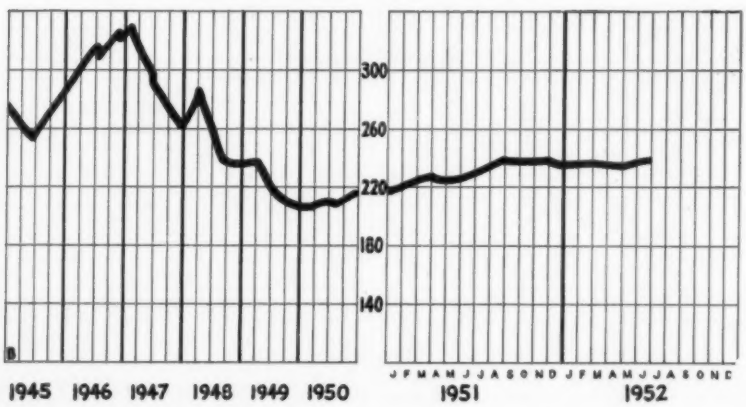
The industry has also been influenced by the growing trend toward use of machines to extract the wax powder from the fronds, because this method increases the output of wax.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index remained at 113.5. There were no changes.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index went down from 238.3 to 236.2. Buchu leaves and senna were lower.

Production of carnauba wax in the fiscal year 1951-52 is estimated at 11,200 metric tons, the output by states being, Ceara, 4,800 tons; Piaui, 4,500; Rio Grande do Norte, 700; Maranhao, 550; Bahia, 400; and Paraiba, 250.

Carnauba Wax Much Higher

Very little buying is going on as far as carnauba wax is concerned because of the high prices of the material which have developed over the past few months. The No. 1 grade is currently priced at $1.28, and the North Country No. 3, at 99c a pound. Since the Brazilian government is financing the carnauba industry, producers and exporters in that country are reportedly holding off on selling the wax, awaiting a greater demand. By the end of June, this action seemed to be quite futile, because many consumers in the United States appeared to be using larger quantities of extenders and substitutes in their finished products. In other words, the Brazilian producers were apparently pricing themselves out of the market, and the longer they waited, the more business they were apparently losing.

Zinc Oxide Down ½c

As a result of a lower price in the price of zinc metal, zinc oxide last month fell off ½c to 19½c for less-than-carlot quantities. The carlot price was 18½c.

Cassia Getting Scarce

With no replacements from China possible at the present time, this oil is becoming increasingly more difficult to find. The price is still in the range between $5 and $6.50, although in view of the very tight position, some dealers feel there will be an increase in the near future.

Lanolin Situation Clarified

There has been no relief in lanolin as far as the raw material supply picture is concerned, since the wool industry is still sluggish. A uniform price ceiling regulation (#146) has been established, however, by the Office of Price Stabilization, which applied to all manufacturers and processors in the industry.

The following figures represent the ceiling prices of various grades of U.S.P. lanolin when sold in containers of 400 pounds and over, F.O.B. processing:

Special Anhydrous Cosmetic Grade	**.405**
Anhydrous Cosmetic Grade	**.355**
Anhydrous Pharmaceutical Type	**.335**
Hydrous Pharmaceutical Type	**.320**

For containers of less than 400 pounds the above prices apply, plus the differential in cents in effect during the period from December 19, 1950 to January 25, 1951. Sellers may require the return of containers of 100-pound size or larger and may require a reasonable deposit which must be refunded upon return of the containers in good condition. Transportation costs on return containers must be borne by the seller."

Expands Essential-Oil Operations

N. V. Chemische Fabriek (Naarden) has opened offices in Paris and will operate mostly in the cosmetic and perfume trade, in addition to the food industry. The company has established another branch in Japan with main offices in Tokyo and a subsidiary office in Osaka.

In South Africa, the Johannesburg branch which was set up in 1951 is readying a plant which will produce essential oils and other basic products. Naarden's complete line of operations includes vanillin, glycerol, synthetic perfumes, sodium benzoate, benzoic acid, perfume compounds, essences, concentrated fruit juices and gallates, as well as the essential oils.

Peppermint Oil Unchanged

Peppermint oil remained quite steady in June in spite of the increased demand during the past two months. Dealers report there is enough material on spot to handle all needs until the new oil arrives on the market later this month and in August.

Spearmint Oil Very Tight

As a result of abnormal interest in this oil, the price last month went up to $8.25, and some oil was selling for as much as $9. In this oil, too, spokesmen believe the situation will be relieved considerably after the new crop arrives late this month.

Bergamot Oil Very Limited

Bergamot oil became even tighter last month, with the quotations remaining in the range between $15 and $17.50. At the same time, there continued to be hardly any oil whatsoever available to this country. A number of the essential-oil houses, in fact, have stopped quoting the oil because of low or depleted stocks coupled with the great difficulty of replacement. At the present time there does not seem to be much possibility of relief for quite a while.

Caraway Oil Down 25c

In the face of ample stocks and small but steady demand, caraway oil was reduced to $4 a pound last month.

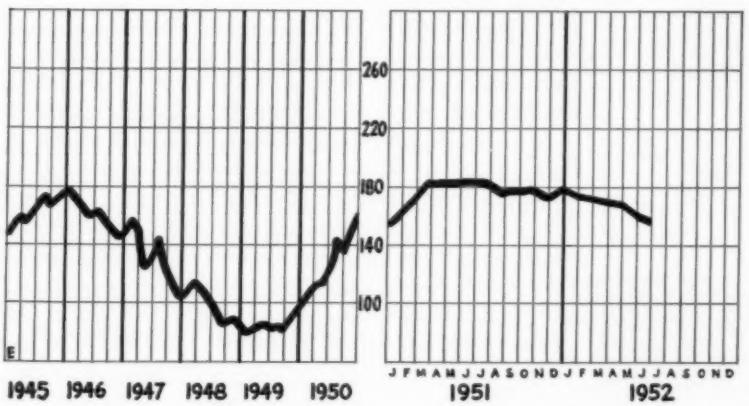
Lemon Oil Very Tight

Demand for lemon oil at this time is at its height, a condition which has brought about a shortage in that product. Spokesmen indicated there was no chance of relief for the duration of the summer, as the consumer demand is continually outstripping the available supply. The price of the California oil remained at the $5.75 figure last month, and the Italian variety climbed 15c to the range between $5.65 and $10.75.

Lemongrass Oil Plentiful

The price of lemongrass oil fell off 40c last month and was selling between $1.50 and $1.80. Not only was there plenty of oil on spot, but offerings from the origin were on the favorable side as well.

15 Essential Oils—Weighted Price Index. 1926 = 100



The essential oils index went down from 167.1 to 159.2. Citronella, eucalyptus and geranium oils were lower; clove and lemon oils were higher.

Lime Oil Higher

This oil advanced 50c in June to $8. Up to that time there had been no information concerning the scope of the new crops from Mexico and the West Indies.

Orange Oil Easier

The situation in orange oil has apparently improved, with dealers reporting there is enough at the present time to handle consumer needs. There have been no recent price changes, and the concensus is that producers will be able to keep up with this demand for the rest of the summer.

Citronella Oil Lower

The already low-priced citronella oil dropped again last month to 80c a pound for the Ceylon variety, while the Java-type oil remained at 65c. There were very plentiful stocks on spot, but the consumers failed to get excited over the favorable prices. At the same time, replacements at the origin were continually being offered. The entire citronella picture was one of extreme softness, with an abundance of material plus a much lower-than-normal price.

Clove Oil in Dire Straits

Clove oil was in a bad way in June. There had been no relief from the U. S. Government by the latter part of the month, and spice prices were much too high for American distillers, and ceiling prices of the oil, much too low, to allow domestic clove oil distillation. Several of the distillers have dropped out of the clove-oil market completely, and probably will not resume operations until there has been some form of official relief. What clove oil there was, was quoted at $7.50—and this was very largely a nominal price.

Geranium Oil Steady

Both the African and Bourbon geranium oil were quoted at approximately $15 on the lower end of the range, and $22 on the upper end. The Bourbon oil was reported to be plentiful enough to handle all needs.

Wormseed Oil Still Higher

This oil advanced further and now ranges between $8.50 and $9, depending on the quality. All signs indicate that this oil will be very tight and high priced until well into the Fall months when new material will be available to the trade.

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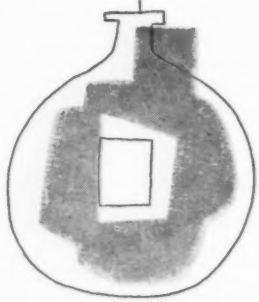

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KINGSPORT, TENNESSEE

(Continued from page 108)

the patent is before this court to exactly the same extent as it is before the Texas court, since the "Assignment" authorizes Sales Affiliates to bring and *defend* suits on the patent. Nothing bars Procter & Gamble's entry here. It has been invited to intervene here, and the door remains open.

Rapidity with which trial will be reached then is the only unique factor in the Texas action. And if the trial is had, the issues it will resolve, irrespective of who prevails, will leave untouched the major issues which are here, and thus the warfare will continue essentially unabated. This is all that is being "cut in" on.

* * *

Motions 6 and 7

Helene Curtis and Gillette each move for a reference of their respective declaratory judgment actions to a master upon grounds that exceptional conditions herein require such a reference within the meaning of Rule 53(b). Federal Rules of Civil Procedure.

As I have sought to indicate throughout this opinion the situation here is exceptional. It is most intricate, of some economic consequence, and it presses for solution. An entire industry is disrupted. All parties stress the urgency of expedition, and the most insistent in this respect has been Sales Affiliates. It is difficult to reconcile its frequent allusions to an early trial in Texas with its opposition to the motions for a reference providing for an early trial in New York. Any contention that Sales Affiliates prefers a trial by a judge of the District Court rather than by a master is rather empty of substance in view of the suggestion made by this court that a former Federal Judge, possessed of vast experience, learning and ability would be considered for appointment as a master.

Protests that costs of the reference will be substantial dissolve when we consider the financial standing of the parties in litigation and the huge stakes involved in the outcome. If the patent in suit be valid, then every passing day in which this is not yet judicially determined sees infringement damages mounting in amounts far out of proportion to any possible costs of reference. If it be invalid but judicially undetermined, daily losses mount in the business of competing products because of the uncertainty which exists. Again such losses would be far in excess of reference costs.

Perhaps Sales Affiliates has been prompted in its opposition to the motions for the reference to a master in the belief that consent to such a reference would lead this court to treat too hastily the motions to stay the trial in Texas. I might have labored under the erroneous impression that its consent to the appointment of a master would in effect destroy its argument that it could not obtain an early trial in New York whereas it could in Texas, and that a fortiori such consent would quite automatically lead to a stay.

However, by rulings this day these battle tactics are transformed into mock warfare. Sales Affiliates'

continued opposition to the reference, and thus an early trial in New York, places it in the anomalous position of vociferously urging an early trial in Texas so that the issues may be resolved while simultaneously opposing an early trial in New York where not only the Texas issues but much more comprehensive ones may be determined.

Even if a trial preference were to be granted in this district by the Chief Judge (to whom the two applications herein should be made) the state of our calendar is such that a trial before the autumn is impossible. To put off decision until then will only seriously aggravate business losses or infringement damages. A reference is the obvious way to a just and reasonable solution of the problem.

In view of what I have said on the motions for a reference, and particularly in the light of my decisions on the related motions, there is afforded to every party a period of five days from the date of the filing of this opinion to advise the court in writing of its willingness to consent to the reference.

C. V. Layden, doing business as Southwestern Beauty Products is given 5 days from the date hereof to file and serve his consent to submission to this jurisdiction and to file and serve his intervening complaint.

PATENT SUITS

2,577,710—**McDonough patent—2 suits for decl. J filed Dec. 4, 1951, in SD of N.Y., one by Helene Curtis Industries, Inc. and the other by Gillette Safety Razor Co.**

Recent Patents

2,588,608—**Am. Cyanamid—Androstendiols.**

2,588,992—**J. R. Schlaeger—Dentifrice.**

2,589,205—**Eli Lilly & Co.—1-Benzylpiperidine Compounds.**

Court Case

2,471,394—**R. Gubner—Salicylate and luccinate therapeutic preparations. Rhodes Pharmacal Co., Inc. v. Dolcin Corp., Consent Judgment Plaintiff admits validity of defendant's patent.**

Copies of U.S. patents may be obtained for 25c each by writing to the Commissioner of Patents, Washington 25, D.C.

Preservatives In Cosmetic Preparations

(Continued from page 39)

not seem to be as well fortified. The role of the antioxidant according to the accepted theories seems to be as a preferential absorber of activating energy preventing this energy from being transmitted to the oil and therefore preventing peroxide formation—since this activation is needed for peroxide formation in the oil. It is therefore expected that the antioxidant will itself be oxidized in the reaction. The oxidation product may be colored and an impartation of this colorant to the cosmetic preparation may be undesirable as hydroquinone is not used for this reason. The lower

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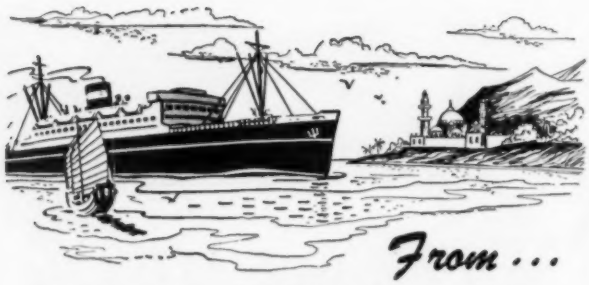

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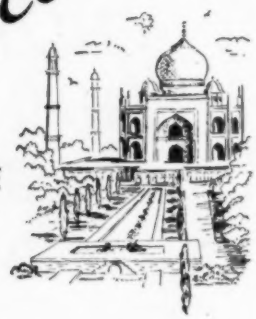

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alkyl gallates are being used with reasonably good success in concentration of about .01 per cent and more recently a mixture of two isomers of butylated hydroxyanisole with propyl gallate and citric acid.

Even the best of these agencies cannot assure the manufacturers of indefinite freedom from rancidity. These substances are capable of retarding a reaction but not completely stopping it. If there is any tendency towards rancidification the product should be packaged to exclude as much air and light as possible; two factors which are thought to be necessary initiators of the oxidative rancidity reaction.

Kissing Bugs

(*Continued from page 35*)

recently incorporated in tooth pastes, mouth washes, tablets and candy. None of these preparations have any effect on the incidence of mouth or lip bacteria, however, clinical results indicate clearly their deodorant activity.

(8) Persons suffering from upper respiratory infections such as: colds, flu, rhinitis, virus X, sore throat or pneumonia, etc. should not be kissed on the lips (ask your physician).

(9) Persons in hospital communicable disease wards should think twice before kissing once (ask the nurse).

Authenticity of the Results:

Our results show trends not infallible statistical data. The evaluations and interpretations are subject to wide ranges of environmental effects.

Bacterial flora may vary from day to day, influenced by air temperature, humidity, season, climate, altitude, food intake, dust inhalation, or daily work environment.

Acknowledgements:

The many human guinea pigs in this experiment who would rather kiss a blond, but who were talked into pressing their reluctant lips on sterile nutrient culture media, or blood agar base substitute.

P.S. After reading this manuscript, you will probably say "To Hell With the Kissing Bugs," and the author can only utter an understanding AMEN.

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Surface Active Agents and the Eye

(*Continued from page 37*)

III. Conjunctivae

A. Redness (refers to palpebral conjunctivae only)

Vessels definitely injected above normal.... 1
More diffuse, deeper crimson red, individual vessels not easily discernible..... 2
Diffuse beefy red..... 3

B. Chemosis
Any swelling above normal (includes nictitating membrane)..... 1
Obvious swelling with partial eversion of lids 2
Swelling with lids about half closed..... 3
Swelling with lids about half closed to completely closed..... 4

C. Discharge
Any amount different from normal (does not include small amounts observed in inner canthus of normal animals)..... 1
Discharge with moistening of the lids and hairs just adjacent to the lids..... 2
Discharge with moistening of the eye lids and considerable area around the eye.....3

Score (A + B + C) ×2 Total Maximum = 20

The total score for the eye is the sum of all scores obtained for the cornea, iris, and conjunctivae.

In this system of scoring such serious corneal lesions as pannus and phlyctenar reactions are not recorded. These reactions do not fully develop until the 7th day reading and persist for weeks. Any preparation eliciting such reactions is deemed to be too severe an irritant for consideration for cosmetic use about the eyes at that concentration.

A number of cationic, anionic and nonionic surface agents used in cosmetic preparations was studied for eye mucosa irritation. The "maximal tolerated concentrations" as given in column 3 of Table 2 are not to be interpreted as the concentrations of these agents producing no eye reactions, but were the concentrations at which no corneal or iris lesions were evident by the seven-day reading.

Many surface active preparations contain less than 100 per cent active ingredient. All data reported in Table 2 are calculated on the basis of active ingredient. Dilutions, where necessary, were made with distilled water.

TABLE 2
Eye Irritation Studies With Surface Active Agents

Trade Name	*Chemical Designation*	*Maximal Tolerated Concentrations of Active Ingredients*
	A. CATIONICS	
BTC®	Lauryldimethylbenzyl-ammonium Chloride	0.5%
Hyamine 1622®	p-Diisobutylphenoxyethoxy-ethyldimethylbenzyl-ammonium Chloride	0.5%
Roccal®	Alkyldimethylbenzyl-ammonium Chloride	0.5%
Isothane Q-15®	Laurylisoquinolinium Bromide	0.8%
Ethyl Cetab®	Cetylethyldimethyl-ammonium Bromide	1.0%
Triton X-400®	Stearyldimethylbenzyl-ammonium Chloride	1.0%
	B. ANIONICS	
Nacconol NRSF®	Alkylaryl Sulfonate	5.0%
Miranol SM®	Capryl Imidazolene Derivative	10.0%
Aerosol OY®	Dioctylester of Sodium Sulfosuccinic Acid	15.0%

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Surface active agents penetrate the eye mucosa readily to produce lesions. The cationics included in our studies produced severe lesions at relatively low concentrations. The nonionics, generally, were the least toxic but these and the anionics do exhibit marked differences in toxicity among their individual members. As reported in Table 2 the maximal tolerated concentration for sodium lauryl sulfate is 20 per cent. However, other lots of the same agent have varied from 15 to 25 per cent as the maximal tolerated concentrations for the eye mucosa.

The final formulation of a cosmetic will include other substances, such as solvents, vehicle, preservatives, etc., and often a combination of surface active agents. Such combinations in final formulation may produce eye irritation in excess of that anticipated from a simple addition of the irritant potentialities of the component parts. An example to illustrate this combination of irritant effects was encountered in these studies by simply combining solutions of a cationic with a nonionic agent. The corneal and iris lesions produced by either a 20 per cent alkyl aryl polyether alcohol (nonionic) or 1 per cent lauryl isoquinoline bromide (cationic) require approximately 4 weeks to heal. A solution containing both of these agents in these concentrations will produce eye lesions which have not cleared in 10 months of observation.

Summary Conclusions

1. Surface active agents penetrate the eye mucosa freely to produce lesions.
2. In some instances variations in local toxicity to eye mucosa were observed between different lots of the same preparation.
3. The combination of surface active agents in a preparation may produce irritation in excess of that which might be anticipated by the simple addition of the irritant effects of the individual agents.
4. Wide variations in toxicity were observed in the anionic and nonionic groups. The order of toxicity was cationic > anionic > nonionic.
5. A cosmetic formulation containing a surface active agent should be tested for eye irritant properties if such a preparation may gain access to the eye mucosa during normal use or from such use as is customary or usual.

Surface Active Materials in Cosmetics

(*Continued from page 43*)

These additives may be of varying composition, such as lanolin, cetyl alcohol, polyoxyethylene derivatives of fatty acids, vegetable oils, or fatty acid amides. Shampoo formulation with many substances such as these is quite tricky since the majority of them also possess defoaming properties to a marked degree. The latter characteristic, therefore, has to be balanced very carefully against the conditioning effect in order to ascertain the proper amount to be employed in a given formulation. A more logical and more efficient method, theoretically at least, of coping with the problem by attacking it from a different angle is of comparatively recent origin. This method uses enough detergent to give the desired cleansing effect without excessive defatting. It then builds up the foaming properties of the preparation by the use of relatively small amounts of various additives which in the percentages employed do not exert appreciable detergent action. Among the substances used in this method are inorganic salts, such as the various phosphates, modified polyoxyethylene esters, long chain amides, cellulose derivatives and sequestering agents.

Lipstick and Other Make-up Preparations

Cosmetic chemists have for many years sought an ideal solvent for the halogenated fluoresceins, and a dispersing agent for the insoluble pigments in lipstick and similar preparations. To meet this requirement, a product should first of all have substantially greater solvent powers than the materials commonly used, such as castor oil, butyl stearate and hydrogenated animal or vegetable oils. Furthermore, it should be completely devoid of even the slightest toxic or irritating tendencies, due to its mode and frequency of application. An ideal solvent should also be miscible, stable, and otherwise compatible with the other ingredients, such as the various vegetable and animal fats and oils constituting the lipstick base. It should also have an extremely low vapor pressure so as not to evaporate from the lipstick mass even when subjected to elevated temperatures over a long period. The last-named characteristic is important in order to avoid such troublesome phenomena as sweating, bleeding and drying out, which are unfortunately only too familiar to the experienced formulator. These phenomena are particularly vexing since they frequently do not manifest themselves for some time and then only under varying circumstances. Lastly, of course, the solvent or dispersant must be free from any objectionable taste or odor, factors that are often overlooked in routine chemical research procedure.

Numerous compounds have been developed which at first seemed to fill the bill, only to be found lacking in one or more of the fundamental requisites. In these instances, we find perfect examples of products which seemed to meet every requirement when submitted to exhaustive laboratory tests, but which were finally

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•

General Eisenhower's radio address demonstrated that he's more convincing when you can see him while you listen. This, of course, is not true of hardened Democrats, who couldn't be convinced by Eisenhower even if he brought a letter from mother.

•

Conversely, there are those Republicans who continue to regard FDR as a chronic interloper, instead of a President of the United States who was elected four times under the rules of the road. Prejudice is so stupid it will not yield even to Death.

•

The TV influence is so strong on the average voter, many of those sympathetic to Senator Kefauver really think they're answering a Hooper inquiry on "Gang Busters." Next time bet the family jewels that the defeated party will draft "The Lone Ranger"

•

Most pitiful example of poor casting for Television is Senator Richard Russell of Georgia. Universally respected, except of course for his position against a federal FEPC, Russell's bald dome picks up the TV lights in halo style. No politician is acceptable in those terms.

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While Harry S. was no great shucks as an orator or glamour boy, his TV appearances were not without value. Next time he opens a haberdashery it'll be with the confidence that people have seen the cuff links he's selling.

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found to be unsuitable in actual usage. The unforeseen objectionable features encountered varied from product to product. They included sweating, bleeding, blooming, crystallization, rancidity and bitter taste.

Finally, a group of compounds was developed which seemed ideally suited in every particular. These compounds consisted of modified fatty esters with multiple ether linkages which gave them excellent solvent and dispersing properties. At the same time they measured up to all of the other specifications for an ideal lipstick ingredient and stable, bland-tasting, creamy lipsticks with excellent staining properties could be formulated with comparative ease. The customary percentages of bromo acid could be employed with marked increase in staining power, or they could be substantially reduced without affecting the normal stain. Furthermore, this group of compounds proved to have a remarkable dispersing effect upon the pigments used to give the desired shade or overtone in lipsticks; so much so that it was demonstrated that the pigments could be dispersed by hand, using only a spatula without the customary prolonged mechanical grinding and milling. It therefore seemed as if make-up formulation could be revolutionized by the use of these materials. However, when the finished products were handed around for practical testing, the unlooked-for flaw became evident. The finished lipsticks were found to possess all of the qualities expected of the ideal product. They were glossy, creamy, and stained beautifully, but they smeared badly. The particular group of surface active materials used, in addition to being excellent dispersing agents for the pigments and solvents for the bromo acid, proved to have unwanted emulsifying properties, which rendered the lipstick less kissproof, waterproof or smearproof than those formulated with the dispersants in common use. This drawback proved to be the prime reason why this class of compounds could not be universally adopted as replacements for castor oil, butyl stearate, etc. They did, however, find their way into current make-up preparations, but only where a particular formulation was built around them. The emulsifying or wetting out properties in these instances were compensated for by using waxes or fats which are particularly water resistant, and by keeping the percentage of solvent as low as possible. Of course, in make-up preparations other than lipstick, where the smear-proof factor is of no importance, these compounds found ready application. In fact, the emulsifying or wetting out effect has proven most desirable in cake and liquid make-up since it allows the preparation to be applied evenly and permits it to be washed off readily whenever desired.

Only recently, a new class of compounds was developed as bromo acid solvents which overcame the objections previously noted. These compounds are somewhat similar in structure to those in the group previously referred to; but the lipophilic structure of the molecule has been sufficiently lengthened, thus throwing it out of balance, so that the product, although having lost its emulsifying and wetting out

characteristics, still retains its solvent, dispersant and other desirable properties.

Creams

Cosmetic creams generally consist of emulsions, liquid or solid, of either the oil-in-water or the water-in-oil type; that is, the first mentioned basic emulsion consists of droplets of oil dispersed in an aqueous medium, while in the latter case, the reverse holds true, the water being dispersed in the oil. There is one notable exception with which we are all familiar, and that is the borax-beeswax-mineral-oil emulsion known to the user as a "cold" or "cleansing" cream. By employing additives, usually superfatting agents such as lanolin, absorption base, cetyl alcohol, etc., so-called night or lubricating creams are obtained. The borax-beeswax-mineral-oil emulsion is of the multi-phase type, the external or continuous phase consisting of water while the internal or dispersed phase is made up of a relatively coarse water-in-oil emulsion, as illustrated diagramatically in Figure III. Creams of this type are no novelty and have been popular for a good many years. Cholesterol-containing absorption bases are often substituted wholly or in part for lanolin in order to avoid the odor and color characteristic of the latter ingredient, particularly upon standing.

In recent years, attempts have been made to modernize or improve preparations of this type and some of the formulators, as we previously pointed out, automatically and understandably reached for their shelf of synthetic surface active materials. Unfortunately, in this instance, the very efficiency of these compounds provided pitfalls for the unwary chemist. His error usually led him in one of two opposite directions. In a typical instance of a multi-phase emulsion containing a cholesterol absorption base, the formulator reasoned that if the absorption base was capable of absorbing X times its weight in water, a great improvement would

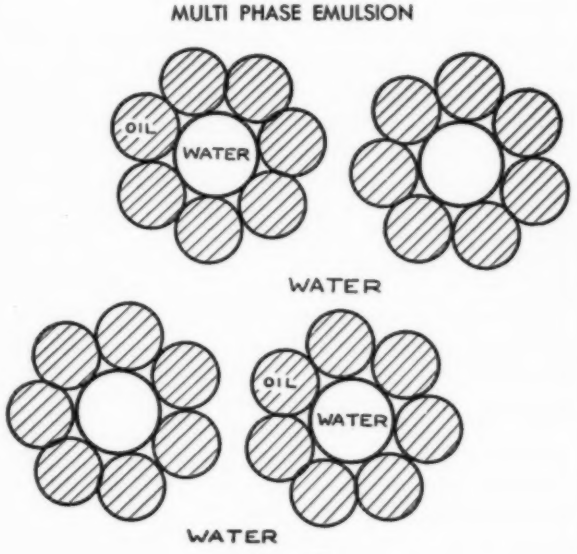

Figure III

Amino Products

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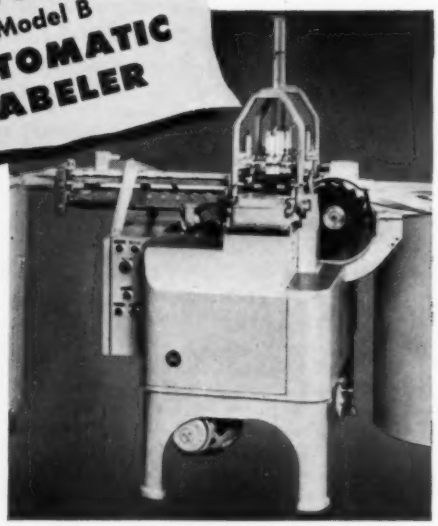

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be accomplished if it were to be replaced with a synthetic emulsifier, such as an oleic ester of a polyhydric alcohol, which could absorb 20 X times its weight in water. Furthermore, this would effect a considerable saving since these esters are much lower in cost than absorption bases containing cholesterol. The net result of this logical, but faulty, reasoning was an unstable emulsion, which separated oil from the top. The synthetic ester was so efficient as compared to the absorption base that the emulsion was thrown completely over to the water-in-oil side. Since the ingredients were not balanced for this type of emulsion, some of the oil separated and migrated to the top of the preparation.

The second example, taking the opposite direction, is the formulator who reasons that the borax-beeswax-mineral oil combination is old hat, and that it should be replaced with a more modern emulsifier, say a nonionic type, such as one of the polyhydric esters of stearic acid which have proven to be such excellent oil-in-water emulsifiers. The resulting unstable preparation parallels the first example, except that in this case the emulsion was shifted toward the oil-in-water type, for which the basic ingredients were neither selected nor proportioned.

Another example of the secondary characteristics of a surface active material being undesirable might be cited in the case of creams which are intended to remain on the skin surface. In this category we might mention suntan creams, or the various make-up preparations where it is required that the product remain on the skin surface and not penetrate the inner epidermal layers. In these instances the emulsifiers have to be chosen with care so that they do not endow the finished product with skin penetrant properties and cause it to be absorbed. Of course, in the case of medicinal or treatment preparations a penetrating effect is likely to be most desirable, and the emulsifier should therefore be chosen with this property in mind.

Conclusions

While it has been the purpose of this paper to indicate some of the limitations of surface active materials in the formulation of toilet preparations, their major role in present day formulation should not be minimized. Shampoos and dentifrices, which cleanse and lather instantly with hitherto unknown efficiency, deodorant, astringent and depilatory creams, indelible lipsticks, multi-shaded nail enamels are just a few of the preparations whose development was made possible only as the result of the availability in commercial quantities of these extremely versatile ingredients. However, so much stress has been laid on the outstanding advantages of a particular compound or class of compounds that a study of their other characteristics, which may not necessarily be of particular merit, is essential. We have endeavored to point out that, in order to utilize these materials intelligently and successfully, it is necessary to have a thorough understanding of all of their properties. A working knowledge of these factors will be of immeasurable assistance to the formulator in selecting

the proper materials from such a formidable conglomeration. It also goes without saying that after the individual characteristics of a given compound have been studied and determined, the next step is to acquire a working knowledge of how it will act in combination with others. The cosmetic chemist who arrives at the latter stage before his social security benefits become due will indeed have led a full life.

Clinical Research and the Manufacturer

(Continued from page 45)

science is almost as new to the doctor as it is to the drug manufacturer. Until the past thirty years the practice of medicine remained as much of an art and as little of a science as it was in the days of Hippocrates. True it was a better art, but the new scientific approach to drugs and drug therapy brought into discredit many of the traditional remedies.

The clinical research man is a breed known to many of you. This genetic sport has been spawned in the last two decades out of the conjugal relation of drug house and doctor. The young physician who has been in practice long enough to learn that the operations and drugs which he learned in medical school or hospital are not the panacea for all human ills is attracted to clinical research. Filled with zeal of his profession he is lusty for the adventure of bringing new technics into trial; he often is the clinician in the community who has the reputation of trying anything once. He is usually one sincerely and personally interested in his patients, indefatigable in his love and interest in medicine, and can be found on the wards of your hospitals at any odd hour. The clinical research man is of an inquiring disposition who feels that there must be drugs and technics better than those in use.

Clinical evaluation of new compounds is now about equally divided between individual research physicians and hospital out-patient departments. It is a growing conviction of many pharmaceutical houses that the clinical evaluation of drugs in the out-patient department of big hospitals where histories and records are obtained by students and interns is fraught with grave danger. This opinion is shared by many who work impartially in office or clinic.

Interpretation of patients' symptoms, understanding of their moods, wheedling them into full cooperation in the experiment, requires often the patience of Job, the wisdom of Solomon, and the resourcefulness of Isaiah. I might add that these cardinal virtues so essential to the proper execution of a research project are usually embodied only in part by the physician. His research assistant, oftentimes a nurse, is an essential. The final evaluation of patient response is a fine art and often not amenable to laboratory confirmation.

In the evaluation of a drug or hormone it is not enough to ask the patient to take it at a certain time, over a certain number of days, at a particular period in relationshp to food or menstruation, or some other physiologic phenomenon which we are attempting to

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evaluate. In order for the study to mean anything the compound must be taken at the appointed time, under the appointed conditions, in the appointed dose, and the records kept in the appointed manner, all under the control of the investigator trained in the technic of clinical research. When these conditions are met and the full cooperation of the patient is obtained the carefully planned program of clinical and laboratory study must be executed strictly according to the plan. The effect of medication upon a particular symptom or complaint under consideration must be recorded according to a certain definite plan drawn by the investigator. The execution of this detail is the function of one's clinical assistants but the framing of the questions is the job of the physician.

Clinical research must be pin-pointed on some particular clinical syndrome and usually a particular symptom in that clinical syndrome. It is not possible to do "buckshot" research in the field of clinical medicine. One variable is enough and the introduction of a second one confuses the issue to the point where often nothing is accomplished.

For example, one of the large pharmaceutical houses recently had a compound which was known to be an effective hemostatic in certain bleeding states. It was desired to evaluate the compound on clinical conditions associated with menorrhagia. The material had previously been tested by another investigator and reported to be worthless in the control of abnormal uterine bleeding. Upon inquiry, it was learned that he had given the drug under a well planned research schedule to one hundred women suffering from menorrhagia and satisfactory hemostasis was obtained in only about 10 per cent. He concluded, therefore, that the compound had no therapeutic value. Now menorrhagia is a symptom and not a disease. When a group of patients with menorrhagia is broken down according to etiological and patho-physiologic status, disease syndromes of quite variable etiology are found. It soon became apparent that one group of patients, namely those with uterine bleeding from a secretory phase endometrium and bleeding of a cystic nature were controlled in about 100 per cent of cases. Definition of the type of cases for which a new compound is to be tried is absolutely essential. You cannot say that such and such a compound is useful or not useful in any given symptom complex when you first define the pathologic state under investigation.

The best laid plans of mice and men often come to naught but occasionally they bring us into new and unanticipated fields of research interest. Some years ago there was a product under consideration which had been developed with the hope that it might alleviate the symptoms of dysmenorrhea. The compound was given to a group of women known to have severe primary dysmenorrhea. The drug was started during the week prior to the onset of the expected menstruation and the patients followed over a period of several succeeding cycles. The history from these patients was recorded on prepared charts which were drawn and

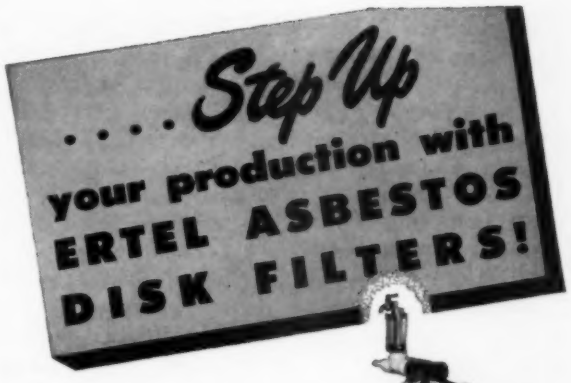
framed for the interpretation of the clinical data pertinent to this particular syndrome, namely dysmenorrhea. It became apparent as these charts were studied that the pain of menstrual cramps was not significantly changed by the administration of the drug. However, the patients' other signs and symptoms associated with menstruation, namely those vague, intangible symptoms of headache, breast fullness, lower abdominal pain, lumbar pain, were significantly altered and in many cases entirely eliminated. This was a completely unexpected finding in the clinical response of these patients.

On further examination of the charts it was apparent that whereas these patients had formerly been gaining 4 to 6 lbs. in weight during their premenstrual week, now while under this drug weight gains were much less. It was apparent that something was going on not related to myometrial contractions and not related to the pain inducing mechanism of menstruation. What was this biochemical effect which was relieving the patient of her premenstrual molimen? The failure to gain weight while taking the medication during the premenstrual period was believed to be related to the clinical relief. Studies were instituted which ultimately showed that this drug had a specific effect in preventing abnormal water storage induced by pitressin. Premenstrual edema, intercellular fluid edema could be prevented by this compound and furthermore the water storing effects of pitressin in laboratory animals and humans could be blocked. Disturbances in water metabolism are an essential feature and an important part of the pathologic physiology in many disease syndromes. It can thus be seen that if a compound has been discovered which effectively blocks intracellular water storage induced by certain endocrine dysfunction then many clinical uses for this compound come to mind. Chain reaction may be set up when a single drug is submitted for clinical investigation.

The laboratory research man has such experiences often but the well controlled, careful experiments of the laboratory cannot be executed at the bedside. The human being is not a laboratory animal and cannot be reduced to a standard of equivalents comparable to the macaccus rhesus or the guinea pig. We have to take her as we find her and evaluate drugs first of all without jeopardizing the health and well-being of patients, and secondly we have to observe the results of the medication not against the clear backdrop of controlled laboratory study, but against the kaleidoscopic multicolored checkerboard background of people with personalities.

One who does clinical research must first and above all be a physician, experienced in the ways of patients with all their foibles, trials, and tribulations. Clinical experience and this alone enables him to determine whether any given drug or hormone does or does not do that which it has been said to do in the laboratory.

After some years of dealing with the pharmaceutical manufacturers, I have learned or I should say I have begun to suspect, that when a new compound has been



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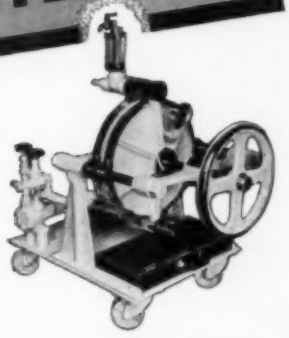

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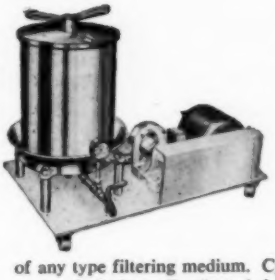

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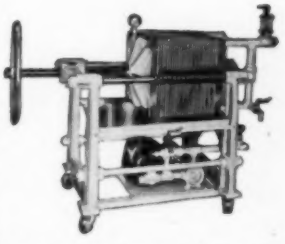

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shown to have a therapeutic niche to fill, there yet remains one unfulfilled longing in his breast. It has to do with bringing this beneficial discovery into the hands of those who need its health-giving, life-giving properties, and getting it into as many such hands as possible. This matter apparently occupies considerable thinking time of those responsible for the development and manufacture of these fascinating and interesting chemical combinations with which we are privileged to experiment.

To fill this longing there is one quality which the clinical research man should have and that is facility with the pen. His most diligent efforts and his most careful study of a compound are as nothing to the pharmaceutical house if it is not written down. It is the mystic quality of the written word that counts; the power and the glory and the amen of all medical research is to get it in writing. "If it ain't written down it ain't true" is the philosophy which motivates the medical director of every pharmaceutical house of my acquaintance.

Once the reports are properly filed, nevermore to be inspected, the time has come for the submission of the manuscript to one of the medical journals for publication. No self-respecting medical director who has spent a few hundred dollars out of his net earnings of a few million ever draws a full night's sleep, ever lies down to his slumbers with conscience clear, until he has seen the fruition of these efforts appearing in legitimate, dignified black and white on the pages of some respected journal of national prestige.

I don't know why this should be. Even the most casual perusal of our national medical journals would reveal that not every article therein published is a nugget of pure wisdom, a pearl from the crown of Solomon. Be that as it may, when the publisher having examined the manuscript and submitted it to his board of editors returns the verdict of "Accepted," immediately there are cries of "Hosannah" in the halls of the medical director.

The next thing we hear from the medical director is a politely worded letter, sometimes a note on the back of a postal card: "Dear Doctor, would it be all right with you if we ordered a few reprints of your article soon to appear in such and such a journal, for our files, yours truly." The answer is a courteous "Yes." Some days later you may be in contact with the publishers and in the course of conversation learn from a casually dropped remark that such and such a pharmaceutical house just ordered fifty thousand reprints of your last article. When you are new in the field, your ecstasy knows no bounds at the thought that a company should feel so kindly towards your brain child. Alas, the rude awakening comes when one finds that this great interest in the written word does not stem entirely from a desire to spread the gems of scientific truth throughout the world. The suspicion creeps in as one grows older that this zeal of the manufacturer may be tinged by something a bit more vulgar. However, this is as it must be and no harm done.

The relationship between clinical research man and the pharmaceutical house is healthy, scientific, honest, and honorable. Pharmaceutical houses of this country have from time to time invited me to participate in a piece of clinical investigation. I have not yet by intimation, suggestion, or negation had suggested to me any approach to a problem other than one that falls completely within the ethical standards of our profession. Indeed, the most scrupulous watchdog of medical research today is the pharmaceutical manufacturer. It is he who screens, investigates, tests, discovers, and gives clinical trial to the unending parade of new compounds coming out of the test tubes of the biochemists. It is his job to know which one of these may be and which one may not be of clinical use. The clinical research worker depends upon him for the toxicity studies. The controlled animal experiments which give sound basis for hope that a given compound may prove useful in the clinical management of some clinical disease or dysfunction is a necessary predecessor to clinical research.

The man of the laboratory, the man of business, and the man of clinical practice make up a team for bringing more health, more happiness, and more hope to more people in more of the world with each passing year.

Pros and Cons of Chlorophyll as a Deodorant

(Continued from page 30)

quantity or dosage required for these varied uses. Failure to define the nature, purity or strength of the materials used in the various products leads not only to confusion but to abuses as well. According to one recent report[10] on chlorophyll products, the quantity of the material present in some products is so small that it does little more than act as a coloring agent.

The danger of such abuses is well appreciated by many chlorophyll producers and users. Since chlorophyll is expensive, and because a product's effectiveness as a deodorant is in direct proportion to the amount and purity of the chlorophyllins used, several manufacturers hope to form a chlorophyll association which would try to establish general standards and ethics for the industry.[11] The need for standardizing chlorophyll derivatives is quite obvious and, even though it is not an easy task, work along these lines is being done.

There are certain phases of utility where chlorophyll's efficacy as a deodorant is well substantiated and widely accepted. Predominant are those phases concerned with the use of chlorophyll to promote healing and serve as an effective deodorant for putrefactive lesions.[12] Back in 1940, in his pioneering work with the water-soluble chlorophyll derivative, Gruskin[1] reported how effectively these compounds cleared up the foul odor in cases of ulcerative cancer. He was granted patents[13] on the use of these derivatives in medicinal products.

Subsequently, other workers[14-18] found that chlorophyll could overcome the odor of necrotic tissue and

exudate associated with suppurative and draining wounds such as compound fractures, chronic osteomyelitis, abscess cavities, deep senis tracts and decubitus ulcers. The chlorophyllins were also effective against the odors of chronic leg ulcers, ozena and ulcerative stomatitis. Smith,[8] for example, called attention to the "prompt deodorization and cleaning up of infected, ulcerated lesions, such as carcinoma and varicose ulcers, clinically, often within a matter of 48 to 96 hours . . ."

In their report in the *Journal of the American Medical Association*, Moss and his colleagues[19] stated that chlorophyll was found consistently to be an effective deodorant when used on foul-smelling wounds. In accepting water-soluble chlorophyll derivatives for inclusion in "New and Nonofficial Remedies," the Council on Pharmacy and Chemistry of the A. M. A.[20] noted that a solution or ointment containing these substances is used for deodorization and relief of itching in wounds, ulcers, burns and dermatoses. In considering the means by which chlorophyll provides these effects, the Council report states that the substance does not exert a significant disinfectant action, and the mechanism of its deodorant effect on foul-smelling chronic lesions is not clear.

In addition to these topical applications, the deodorizing action of chlorophyll has proved to be a great boon to patients with colostomies, a "short circuiting" operation in which the colon is joined to an artificial opening in the abdomen. Goodman[21] found that the highly embarrassing fecal odors could be abolished for several hours by placing a capsule containing a mixture of chlorophyll and kaolin within the colostomy immediately after the morning irrigation and evacuation. Astler and Morley[22] found that suppositories containing chlorophyll could also be used for the deodorization of colostomies.

Using a different approach, Weingarten and Payson[23] attempted to eliminate the unpleasant odor of colostomy discharges by the oral administration of chlorophyll tablets. The results were uniformly good, being most gratifying not only to the patients, but also to their neighbors and to the hospital staff. On the basis of these observations, it was suggested that the same procedure may be used to eliminate bed pan odors in nonsurgical patients. From experiments along similar lines, Westcott[3] reported that to be an effective stool deodorant, the chlorophyllins must be present in sufficient amount in the colon. He found that enteric coated tablets permit release of the material in the part of the tract where it will do the most good.

In addition to its beneficial action against the odors of wounds and colostomies, there are a number of published reports which indicate that chlorophyll has a positive effect in the management of unpleasant odors from the mouth due to foods, beverages, tobacco and metabolic changes. It is also valuable in the control of odors from perspiration due to physical exercise, nervousness and illness, and for the alleviation of obnoxious foot odors, menstrual odors, and urine odors

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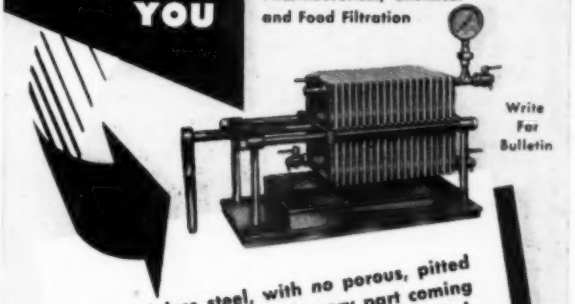

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from many ingested materials.[24] In the comparatively short time since Westcott[2] suggested the possibility that injected chlorophyllins might be useful against body odors, chlorophyll tablets and related products have reached the stage where they offer sharp competition to the various external deodorants, including creams, liquids and sprays.[11,25]

In the report that attracted so much attention, Westcott[2] stated that, as a result of his varied tests, 90 per cent of those receiving his chlorophyllins had obtained favorable relief of body odors. In a later report covering additional groups, he[26] reaffirmed that about 90 per cent of all cases were satisfactorily relieved of body and breath odors. He[3] also noted that controls, in the form of placebos, had been used in the investigations with a group of athletes.

Working with a small group of subjects, Serling[27] similarly reported on the effectiveness of chlorophyll tablets as a deodorant for the body and breath. Subsequently, Montgomery and Nachtigall[28] stated that specially prepared chlorophyllins effectively reduced the measurable underarm odor both in industrial workers and in college athletes. They also obtained encouraging results in reducing the odors from pathological conditions following the oral administration of larger doses of chlorophyll. Unpublished work by G. W. Rapp, cited by Weingarten and Payson,[23] indicated that tablets of chlorophyll produced effective deodorization of breath, body and urine odors.

The largest group of subjects studied thus far was discussed by Tebrock.[7] He reported that of a total of 567 subjects, including executives, office workers and factory workers, 480 or 84 per cent were recorded as getting "good" or "fair" results in eliminating various types of body odor. Chlorophyll was most successful with general body and breath odors, while foot and menstrual odors were more resistant. In summarizing the findings, Tebrock stated that the data confirm the fact that a dosage of 200 mg. daily of a suitable grade of chlorophyllins is an effective systemic deodorant for most people. It was felt that where chlorophyll was not effective, dosage was an important factor. This point is being checked.

Taber[29] has shown that a chlorophyll preparation was effective in obliterating menstrual odors and lochial odors (e.g. those associated with the vaginal discharge following childbirth) in a high proportion of his cases. Deodorization of other body and breath odor was also noted during the study. Since it is nontoxic and produced no untoward effects, Taber felt that more frequent doses of chlorophyll could be given safely where its effect is of short duration. Of related interest is the observation, by Astler and Morley,[22] that orally administered chlorophyll successfully masked the foul odor accompanying leukorrhea.

Not all the work has been done in this country. In Holland, Dijkstra[30] tested a chlorophyll preparation (of undisclosed imposition) for its effectiveness as a deodorant. Instead of using pure chemical compounds, as has been done in some American work, he tested the chlorophyll against rotting cheese and milk mixtures, human pus, and multivitamin tablets. He found, in all cases, that the odors were completely suppressed when these materials were incubated with the chlorophyll. In tests on humans, in which the chlorophyll preparation was given orally, he observed the suppression of the characteristic odor in urine after eating asparagus. Similarly, it had a strong effect in reducing the odors of alcoholic beverages, and garlic and onions on the breath. Dijkstra therefore concluded that chlorophyll may be regarded as a universal deodorant having a distinct reducing effect on all body odors.

Although a number of theories have been suggested, the mechanism by which ingested chlorophyll produces its body and breath deodorizing action is not yet explained.[31,32] Nor is there any evidence that the orally administered chlorophyll decreases the sebaceous secretion or alters the bacterial flora on the skin. This is an important factor since it is generally believed that a large part of body odor is due to bacterial decomposition of sebaceous secretions on the skin.[31]

Taking cognizance of this fact, Westcott[3] feels that it is asking too much of any ingested medicated substance to control bacterial odors on the unclean skin. In a like vein, the literature[33] of the pioneer in the therapeutic chlorophyll field states that "*no* chlorophyll preparation taken internally can completely control perspiration odors of exogenous origin. Perspiration rendered odorless internally by chlorophyll may in time undergo putrefaction by skin bacteria."

Noteworthy in this connection are observations made by Killian[34] during his rather detailed study of deodorants. Expressing a somewhat dissenting view, he stated that the oral administration of chlorophyllins had no demonstrable influence on the odor-producing capacities of perspiration. His data gave evidence of the failure of the ingested derivative to either retard or inhibit the chemical or biological reactions which, on the skin surface, result in the production of offensive odors.

Before leaving this phase of chlorophyll utility, there should be some comment on its use for deodorizing dogs. Working with several breeds of dogs, Serling[27] found that chlorophyll, given orally, was a useful aid in eliminating most objectionable body and mouth odors of these animals. Similar observations have been reported by others. For example, in a discussion following one of Westcott's[26] popers, Munch stated that chlorophyll-fed female dogs seemed to have lost their sex appeal for males of the species. At present, in addition to tablets, many dog foods contain chlorophyll to make the family pet more welcome in the home. A special preparation of chlorophyll is available commercially for inclusion in dog foods.

The claims for a number of chlorophyll tablets are limited to deodorization of breath odors. The tablet or lozenge is allowed to dissolve in the mouth to produce a local effect.[3,11] The same effect holds true, of course, with dentifrice. Although chlorophyll-containing tooth pastes have been studied with respect to their effect

on dental caries and the gums, only those phases devoted to deodorant action are under consideration here.

Quite a number of chlorophyll-containing tooth pastes are on the market today, including some with the double appeal of both the caries-preventing ammonium ion and deodorizing chlorophyll. It should be mentioned that there is a definite valuation in the actual chlorophyll content of these several products. However, there was only one chlorophyll-containing tooth paste available when Rapp[35] submitted it to a variety of laboratory and clinical tests. On completion of the deodorant studies, he stated, "We may draw this general conclusion that chlorophyll-containing tooth paste is able to reduce objectionable mouth odors to a minimum that is far below the values achieved by using a control paste and furthermore that there is substantial inhibition in the return of an objectionable odor to mouths treated with Chlorophyll-containing tooth paste."

Following publication of a popularized version[36] of Rapp's work, the Council on Dental Therapeutics[37] felt it necessary to advise the dental profession to adopt a conservative attitude toward the subject of chlorophyll tooth paste until a more comprehensive attitude can be completed.

This viewpoint is perhaps reflected in the statement attributed[38] to F. C. Baker, new president of the Indiana Dental Association, to the effect that people who use chlorophyll tooth paste can get the same effect by eating parsley. This, of course, recalls the old custom of chewing a sprig of parsley to remove garlic odor from the breath. In the same vein is a garlic-based preparation for treating hypertension, the tablet being compounded with dehydrated parsley to prevent unpleasant breath odors during therapy.

Aside from such expressions of skepticism, at least one producer of tooth paste is bucking the trend toward the inclusion of chlorophyll.[39] The advertisements for this product ("Listerine" tooth paste) loudly proclaim that it is "proven clinically better than chlorophyll to stop bad breath." More subtly, the advertisements also call attention to the "snow white" color, and "minty," flavor of the tooth paste.

However, several studies are now going forward to determine the effect of dentifrices containing water-soluble chlorphyll derivatives on the teeth, gums and on mouth odors. One result of this work is already available in Barail's[40] report on the deodorizing properties of chlorophyll in dentifrices. Fifty subjects were used in his investigation. They brushed their teeth with two dentifrices of identical basic formula; both containing insoluble sodium metaphosphate as a polishing agent. The test tooth paste containing, in addition 0.1 per cent of sodium copper chlorophyllin. Data obtained after nearly 1,000 odor measurements clearly demonstrated the superiority of the chlorophyll dentifrice over the plain dentifrice in the ability to remove and retard the development of mouth odors. The chlorophyll tooth paste was approximately twice as effective as the plain dentifrice.

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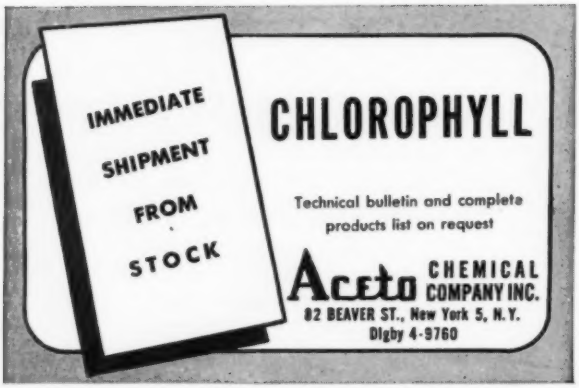

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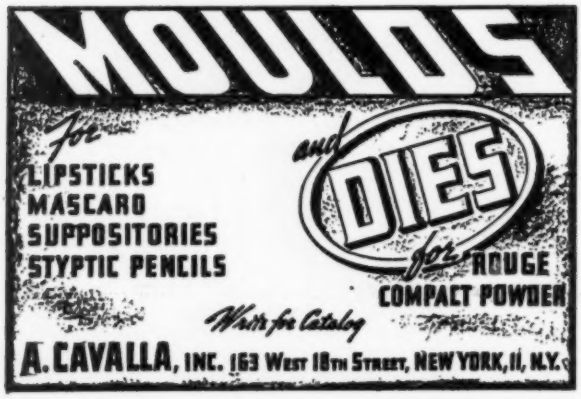

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Useful information on the efficacy of other types of breath deodorizers, like tablets, lozenges, chewing gum and mouth washes, will no doubt stem from studies of this kind. In the meantime, some indicative data are available. Back in 1943, Goldberg[14] noted that the odors of anaerobic infections in cases of oral sepsis invariably disappeared after a few applications of suitable chlorophyll preparations. Chlorophyll solutions for home use were prescribed in many of these cases.

More recently, in testing the effect of chlorophyll on breath odor, Westcott[2] determined the action of both tablets and solution after the eating of onions. He found that rinsing the mouth with a chlorophyll solution or dissolving a chlorophyll tablet in the mouth will speed the deodorizing process and make it more permanent, but this is effective only if the mouth is cleaned. Clinical observations on breath odors caused by faulty oral hygiene or metabolic disorders, commonly referred to as halitosis, as well as odors from alcoholic beverages and smoking, were also effectively combatted by chlorophyll tablets.

Although there has been a steady growth of preparations for direct application to the skin, there does not seem to be much published evidence to back up the deodorizing claims for the chlorophyll present in deodorant colognes and sticks, various lotions, shoe pads and other topically applied products. Obviously, most of the extensive data concerning the effect of chlorophyll on wounds and dermatologic conditions are not applicable in the case of the intact skin.

However, Killian's[34] paper contains observations that may be pertinent with respect to the action of these newer products. He reported that water-soluble chlorophyllins added to malodorous samples of perspiration cause prompt eradications of the perspiratory odors. At the same time, these derivatives show antibacterial action. In one series of tests, 0.1 per cent of the chlorophyllins effected a reduction of more than 99 per cent in the number of viable bacteria in stale perspiration. In addition to their deodorizing action, says Killian, the addition of chlorophyllins to fresh perspiration prevents the development of perspiratory odors under conditions that ordinarily encourage the production of such abnoxious odors.

The effectiveness of chlorophyll as an aid in atmosphere deodorants, whether in the form of sprays, mists, blocks, or toilet tissues, is a moot question. Even though a patent[41] has been granted for the rise of chlorophyll for conditioning and freshening the air, there are those who are skeptical of its value for this purpose. It will be recalled[42] that the manufacturers of the products based on this patent have stipulated with the Federal Trade Commission that they will refrain from making certain claims for these air deodorizers. Among these is the claim that the action of chlorophyll in the product is similar to that of chlorophyll in nature or that the chlorophyll content provides the chief effect in the action of the product.

Also indicative is the statement made by Weaver[43],

of the National Bureau of Standards, in his comprehensive discussion on the control of odors. In response to a frequently-asked question, he says that there is no reason whatever to believe that chlorophyll ever has anything to do with air deodorization.

From the foregoing, it is evident that the claims for the deodorizing action of some chlorophyll-containing products are based on sound evidence. Unfortunately, the same cannot be said for all products and this fact is causing considerable concern among the more responsible manufacturers. They feel that their market is being endangered by statements and claims which, if not dangerous, are often exaggerated to the point of being rediculous.

Aside from the danger of being laughed out of business, some products may be withdrawn for other reasons. As was remarked in *Advertising Age*,[11] some chlorophyll advertisers have been fortunate thus far in that they have not met up with the Federal Trade Commission. A few of them, on the basis of claims for certain products, seem bound eventually to come in contact with this agency.

Perhaps the current situation was best summarized in Stenerson's[4] observation that "chlorophyll is going through the experience that was the lot of vitamins. hormones, antihistamines, and new drugs during the early days of their development. It will probably find wide acceptance in fields where it has proven its value, and vanish quickly from products where its effectiveness has not been proved."

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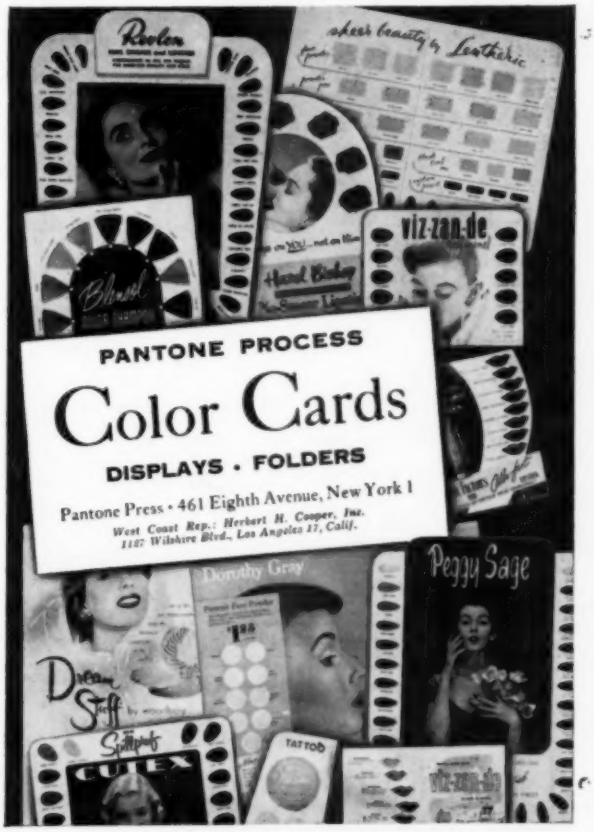

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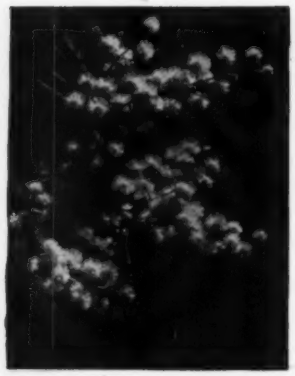

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